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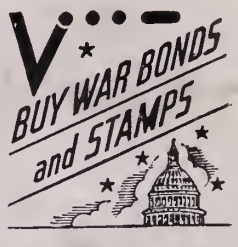
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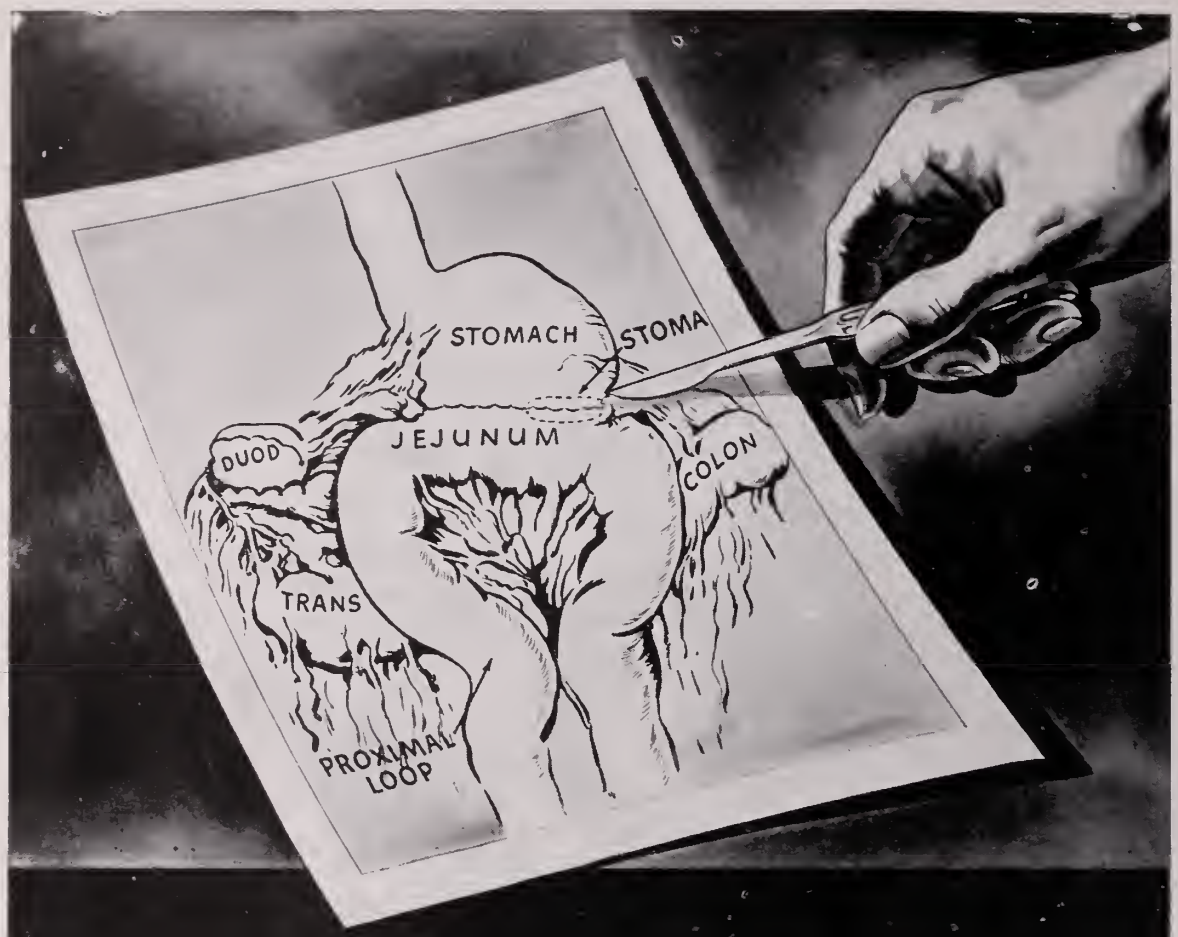
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1. MARSHALL, S. F., and DEVINE, J. W., Jr.: Gastrojejunal Ulcer, S. Clin. North America, 713-761 (June) 1941.

2. FAULEY, G. B.; FREEMAN, S.; IVY, A. C.; ATKINSON, A. J., and WIGODSKY, H. S.: Aluminum Phosphate in the Therapy of Peptic Ulcer, Arch. Int. Med. 67: 563-578 (March) 1941.

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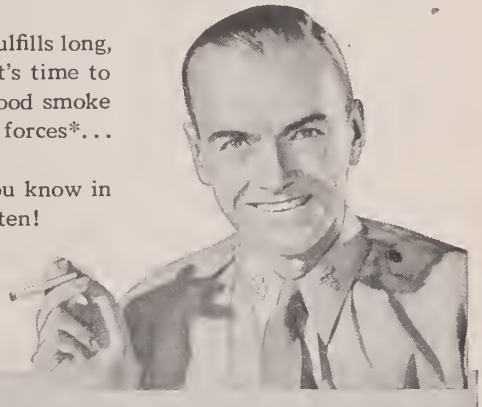
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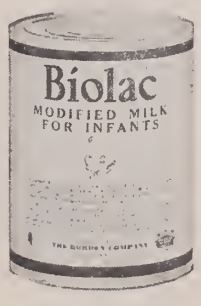
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Anderson	J. B. Lyen	Lawrenceburg	January 3
Ballard	F. H. Russell	Wickliffe	
Barren	C. R. Markwood	Glasgow	January 19
Bath	H. S. Gilmore	Owingsville	January 10
Bell	Edward S. Wilson	Pineville	January 14
Boone	R. E. Ryle	Walton	January 19
Bourbon	George M. Jewell	Paris	January 20
Boyd	Price Sewell, Jr.	Ashland	January 4
Boyle	P. C. Sanders	Danville	January 18
Bracken-Pendleton	W. A. McKenney	Falmouth	January 27
Breathitt	M. E. Hoge	Jackson	January 18
Breckinridge	J. E. Kincheloe	Hardinsburg	
Bullitt	George B. Hill	Mt. Washington	
Butler	D. G. Miller, Jr.	Morgantown	January 5
Caldwell	W. L. Cash	Princeton	January 4
Calloway	J. A. Outland	Murray	
Campbell-Kenton	Robert L. Biltz	Newport	January 6
Carlisle	E. E. Smith	Bardwell	January 4
Carroll	H. Carl Boylen	Carrollton	January 11
Carter	Don E. Wilder	Grayson	January 11
Casey	Wm. J. Sweeney	Liberty	January 27
Christian	H. B. Stone	Hopkinsville	January 18
Clark	W. Carl Grant	Winchester	January 21
Clay	L. H. Wagers	Manchester	
Clinton	S. F. Stephenson	Albany	January 15
Crittenden	C. G. Moreland	Marion	January 10
Cumberland	W. F. Owsley	Burkesville	January 5
Daviess	W. H. Parker	Owensboro	January 11 & 25
Estill	Virginia Wallace	Irvine	January 12
Fayette	Charles D. Cawood	Lexington	January 11
Fleming	Roy Orsburn	Flemingsburg	January 12
Floyd	Robert Sirkle	Weeksbury	January 26
Franklin	E. K. Martin	Frankfort	January 6
Fulton	John G. Samuels	Hickman	January 12
Gallatin	J. M. Stallard	Sparta	January 20
Garrard	J. E. Edwards	Lancaster	January 20
Grant	Wallace Byrd	Williamstown	January 19
Graves	H. H. Hunt	Mayfield	January 4
Grayson	E. B. Deweese	Caneyville	
Green	S. J. Simmons	Greensburg	January 3
Greenup	Virgil Skaggs	Russell	January 14
Hancock	F. M. Griffin	Hawesville	January 3
Hardin	D. E. McClure	Elizabethtown	January 13
Harlan	W. R. Parks	Harlan	January 15
Harrison	W. B. Moore	Cynthiana	January 3
Hart	Vinson Corrao	Munfordville	January 4
Henderson	Walter L. O'Nan	Henderson	January 10 & 24
Henry	Owen Carroll	New Castle	January 13
Hickman	H. E. Titsworth	Clinton	January 6
Hopkins	Wm. H. Garnier	Madisonville	January 13
Jefferson	Herman Mahaffey	Louisville	January 3 & 17
Jessamine	J. A. VanArsdall	Nicholasville	January 20
Johnson	Paul B. Hall, Act. Sec.	Paintsville	January 24
Knox	T. R. Davies	Barbourville	January 20
Laurel	Oscar D. Brock	London	January 12
Lawrence	L. S. Hayes	Louisa	January 17
Lee	A. B. Hoskins	Beattyville	January 8
Letcher	Bert C. Bach	Whitesburg	January 25
Lewis	Elwood Esham	Vanceburg	January 17
Lincoln	Lewis J. Jones	Hustonville	January 21
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Logan	E. M. Thompson	Russellville	
Lyon	H. H. Woodson	Eddyville	January 4
McCracken	Leon Higdon	Paducah	January 26
McCreary	R. M. Smith	Stearns	January 3
McLean	F. L. Johnson	Livermore	January 13
Madison	Scott McGuire, Jr.	Berea	January 20
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Marion	Nelson D. Widmer	Lebanon	January 25
Marshall	S. L. Henson	Benton	January 19

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Menifee	E. T. Riley	Frenchburg	
Mercer	J. Tom Price	Harrodsburg	January 11
Metcalfe	E. S. Dunbam	Edmonton	
Monroe	Geo. E. Busbong	Tompkinsville	
Montgomery	D. H. Busb	Mt. Sterling	January 11
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Nicbolas	T. P. Scott	Carlisle	January 17
Obio	Oscar Allen	McHenry	Januar 5
Owen	K. S. McBee	Owenton	January 6
Owsley	W. H. Gibson	Booneville	January 3
Perry	Lewis C. Coleman	Hazard	January 10
Pike	S. B. Casebolt	Pikeville	January 6
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Scott	H. V. Johnson	Georgetown	January 6
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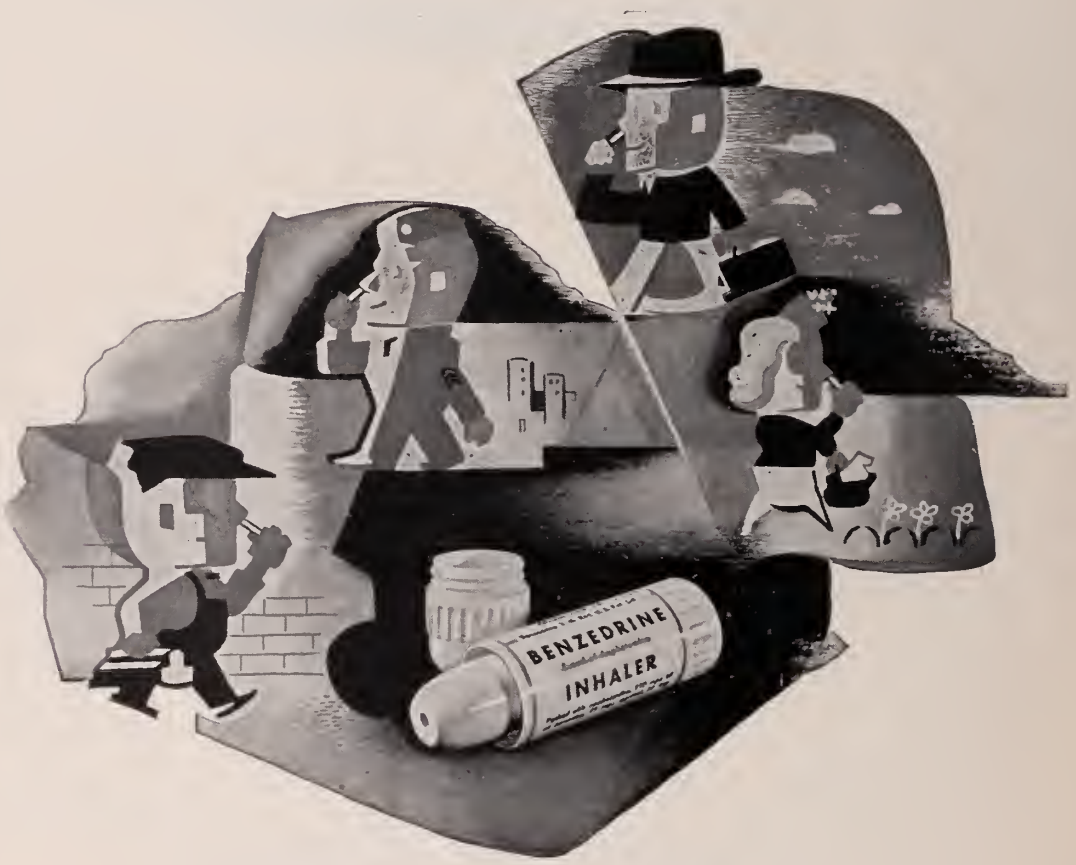
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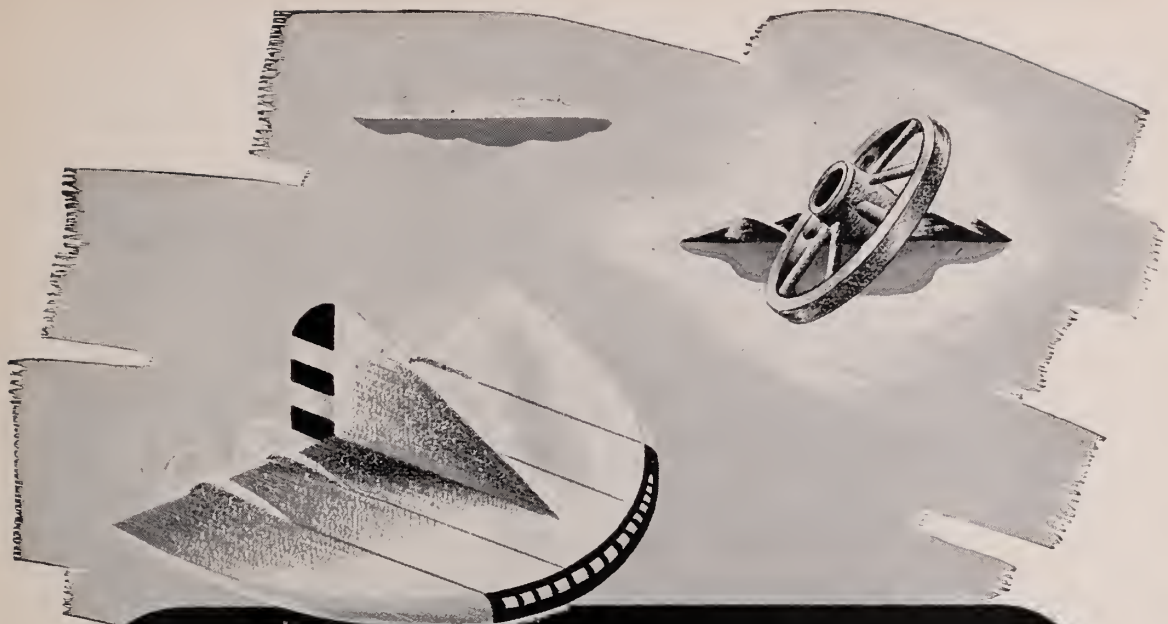


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FIGHT INFANTILE PARALYSIS · JANUARY 14 TO 30

KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

Published Under the Auspices of the Council

VOL. 42, NO. 1 BOWLING GREEN, KY. JANUARY, 1944

GREETINGS

From President-Elect

O. O. MILLER

Louisville

To that noblest of all professions, the country physician, greetings; to those of our confreres on every battlefront and the seven seas, greetings; and to those holding the home front and maintaining the traditions and ideals of a great profession, greetings. A new year is upon us, portentous in all its possibilities.

There never was a time in the history of medicine when the demand on the profession was greater, or when it was more incumbent on us to furnish the maximum in medical service. The past year has amply demonstrated that the profession is capable of meeting all the obligations placed upon it.

Consonant with the principles and ethics that actuate us, and placing these above self, a number of the older members of the profession have permitted themselves to be taxed far beyond their physical capabilities, and have become victims of their own altruism. Their unfortunate demise has deprived their communities of medical care or greatly curtailed it.

There is no necessity to exhort the profession to meet community needs; their record speaks for itself; rather, there is need for a proper appraisal of the physician's energies, and an adjustment in his routine, better to meet the requirements and conserve his health.

This is both a personal and a group problem, peculiar to each locality and capable of solution by the members concerned. The proper utilization of that most precious commodity, time; dispatch in handling cases, a willing cooperation amongst one's confreres to share the burden, can provide a modicum of relaxation for each. For the doctor in isolated communities, who alone carries the whole burden, there is no immediate remedy; he must work out his own salvation. He must be his own efficiency expert. He is the fulcrum, on which rests the lever of professional service, by which public opinion and esteem are lifted and sustained at their traditional high level.

When one thinks of his daily round of tasks, faithfully, skillfully, and unstintingly performed, one marvels at his mental and physical capacity. Surely, in his life and work he typifies God's gentlemen; may his tribe increase, and may all of us continue to catch some of his light and reflected glory to make us better deciples of Aesculapius and servants of mankind. To him and all others who serve and to those who have served, and now "stand and wait," greetings, and a fervent wish that the New Year will bring to each and all of you a full realization of your best hopes.

RELOCATION OF PHYSICIANS

The American Medical Association has just released a Special Bulletin calling attention to H. R. 3598, an appropriation bill in Congress providing funds whereby the United States Public Health Service could assist in the relocation of physicians to meet urgent medical needs. It was first designed to provide for Medical Officers to be paid on a fee schedule basis, or the alternative of an allowance of $250.00 a month for three months, plus the cost of expenses in making relocation. The Bill, finally amended in the Senate and passed, contained the following conditions and restrictions:

Provided, That the Surgeon General is authorized, on application of a municipality, county, or other local subdivision of government duly approved by the State Health Department having jurisdiction over said municipality, county, or other local subdivision of government to enter into agreements with private practicing physicians and dentists under which, in consideration of the payment to them of

a relocation allowance of not to exceed $250 per month for three months and the actual cost of travel and transportation of the physician or dentist and his family and household effects to the new location, such physician or dentist will agree to move to and engage in the practice of his profession in such area for a period of not less than one year: Provided, however, That no such contract shall be made with any physician or dentist unless such physician or dentist shall be admitted to practice by the State authority having jurisdiction of such new location: Provided further, That each such applicant subdivision shall contribute $100 to the total cost of such relocation allowance, travel, and transportation costs of each such physician or dentist and his family obtained by said applicant.

The Bill is now up for consideration by a Conference Committee and it is anticipated that, after the adjustment of some differences, it will become a law.

In the discussion of this Bill, many Senators expressed themselves as desiring assurance that it would in no way involve the socialization of the practice of medicine. It was intended simply to stimulate the relocation of physicians who will ultimately be on their own resources.

CURRENT COMMENTS

It will be recalled that at the recent meeting of the House of Delegates of the Kentucky State Medical Association, the Delegates went on record as approving continuation of the Post Graduate Educational Program which has been carried on so successfully during the previous year, under the auspices of the Committee on Post Graduate Course of the State Medical Association.

A very successful series of four day Post Graduate Programs was held the latter part of October and the first part of November in Western Kentucky. The following Resolutions indicate the appreciation of the programs:

WHEREAS, the Kentucky State Medical Association has seen fit to hold educational programs throughout the State and West Kentucky being chosen as one of the places of meeting,

BE IT RESOLVED that the doctors of West Kentucky extend their appreciation of being chosen as a place of meeting, and,

BE IT FURTHER RESOLVED that we appreciate the doctors appearing on the different programs which were not only enjoyable but highly educational, and

BE IT FURTHER RESOLVED that the doctors of West Kentucky extend their appreciation to Dr. Barbour for his untiring efforts in making the meeting such a grand success and that we request Dr. Barbour to send a copy of these resolutions to all the doctors who appeared on the program.

This the 18th day of November, 1943.

The Sixth Annual Forum on Allergy, sponsored by The International Post-Graduate Society, founded in 1938, will be held in the Hotel Statler, St. Louis, Missouri, January 22-23, 1944. This is a meeting to which all reputable physicians are most welcome, and where they are offered an opportunity to bring themselves up to date in this rapidly advancing branch of medicine by two days of intensive post-graduate instruction. For instance, the fifteen study groups, any three of which are open to him, are so divided that those dealing with ophthalmology, and otolaryngology, pediatrics, internal medicine, dermatology and allergy run consecutively. Attention is also called to the fact that during these last two days almost every type of instructional method is employed.

Numerous County Societies have sent the Editor copies of Resolutions protesting the Wagner-Murray-Dingell Bill. To reproduce them all in the Journal would consume too much space. Without exceptions, these Resolutions emphatically express the indignity the doctors feel when they discuss this proposed legislation.

The Scott County Medical Society unanimously adopted a Resolution expressing in no uncertain language the attitude of all Scott County doctors toward this Bill. The Society had its Resolution printed in full and has been distributing it in a way to arouse both the profession and the lay public.

In this issue is carried an advertisement of a Mid-Winter Post Graduate Conference to be held in Chicago at the Stevens Hotel, March 14, 15 and 16, sponsored by the Chicago Medical Society.

Highlights of the event will be announced later. For information address the Secretary, Chicago Medical Society, 30 North Michigan Avenue, Chicago 2, Illinois.



The above is illustrative of the splendid attendance and good fellowship that prevails at the meetings of the Harrison County Medical Society.

There were visiting doctors, dentists and pharmacists from eight neighboring counties and the total attendance, including Harrison County members, was 63. Everyone present was the guest of the genial Society host, Dr. C. L. Swinford.

Following the banquet and preliminary to the Scientific Program, the Hon. Mac Swinford, United States District Judge, addressed the group and paid a fine tribute to the accomplishments of the medical profession and the work of organized medicine in the State. Dr. W. R. Miner, of Covington, delivered a scientific address on "Posterior Trans-urethral Resection in Prostatitis," which was well received and given generous discussion.

This is the third successive open meeting of the County Society and in each instance Dr. Swinford, the President, was host. Further details of the splendid meeting will be found in the County Society columns.

Captain S. H. Flowers, now chief of surgery of a station hospital in North Africa, some time recently had the privilege of a character study painting of himself by a famous European artist (not named). The friends of Captain Flowers will be delighted to know of his being given this distinction and will look forward to the time when they can see this oil portrait and learn from him first hand some of his Army experiences. Before leaving Kentucky he was located at Middlesboro, where he had developed a splendid practice.

The Medical Director for the Medical and Surgical Relief Committee of America has sent the Editor of the JOURNAL the following letter, requesting that it be published. The letter is intended as an appeal to each doctor who reads it.

"There is a critical need for medical and surgical supplies that may lie hidden and forgotten in your office: discarded or tarnished instruments . . . surplus drugs . . . vitamins . . . infant foods. Collected, packaged, sent to the Medical and Surgical Relief Committee, they can play a vital role in its program of medical relief for the armed and civilian forces of the United Nations.

Surgical instruments and medicines are sought-after by physicians and pharmacist's mates of our Navy . . . are hungrily snatched by the medical corps of our Allies. The work of war-zone hospitals and welfare agencies is too often crippled by the lack of medical supplies. Community nurseries in this country, refugee camps abroad cry out for vitamins and baby foods for their ill-nourished charges.

In the pages of this journal you may have read about the Committee. It has supplied over 900 sub-hunting and patrolling ships of the Navy with emergency medical kits; equipped battle-dressing stations on battleships, destroyers, and cruisers. The Committee's roll-call of medical requests—not one of which has been turned away—reads like a world geography: the Fighting French in North Africa and Tahiti; the Royal Norwegians in Canada and Iceland; the West Indies: South and Central Africa; China; India; Great Britain; Yugoslavia; Greece; Syria: Russia; Alaska and of course, the United States.

To meet the demands that pour into headquarters, the Committee needs all types of instruments, especially clamps, scalpels, forceps, and all kinds of drugs from iodine to sulfa products. By contributing what you can spare, you will help speed another shipment of sorely-needed medical aid.

Very sincerely yours,
Joseph Peter Hoguet, M.D.
Medical Director
Medical and Surgical Relief Committee of America.
420 Lexington Ave., New York, N. Y."

ORIGINAL ARTICLES

ENDOMETRIOSIS OF THE SIGMOND CAUSING INTESTINAL OBSTRUCTION

Report of Two Cases

J. B. Lukins, M. D.
AND
Lanier Lukins, M. D.
Louisville

The word "endometriosis" is used to designate the occurrence of endometrial tissue in the female pelvis outside the uterus. Uterine or tubal epithelium may escape into the pelvis during menstruation, lodge on various structures (especially the ovaries), become implanted, and eventually develop into adenomatous growths that respond to the stimulus of the sex hormones, as does the normal endometrium. These adenomatous islands may develop into hemorrhagic ovarian cysts, so-called "chocolate cysts," or they may occur as small superficial red or purplish elevations on other organs. The tissues which serve as a bed for these alien cells react against them. The result is congestion, fibrosis and pain in the pelvis, and, when the bowel is involved, invasion, stricture and obstruction occur.

Endometriosis of the various reproductive organs is now recognized as a relatively common disease. The importance of this disease as a cause of obstruction of the sigmoid colon has not, however, been sufficiently stressed. Obstructive endometriosis of the sigmond is frequently confused with carcinoma, it is often wrongly diagnosed as some inflammatory or infectious condition and treated medically with little or no improvement.

The correct diagnosis of this condition cannot be minimized, but is rarely made prior to operation.

Two cases of this condition which we have had are summarized for presentation.

Case 1. Mrs. R. L., 40 years of age, was admitted with a provisional diagnosis of carcinoma of the sigmoid. Her chief complaints were nausea, vomiting and abdominal pain. The patient stated that she had been bothered by intermittent attacks of nausea, vomiting, abdominal pain and distention for the past several years and that each attack had been more severe than the preceding one. The last attack began a week before admission with cramp-like lower abdominal pain, nausea and vomiting. Several days before admission a physician gave her some medicine which eased her somewhat and she did not vomit any more until the day before admission. Obstipation had been getting progressively worse for several years. She had not had a good bowel movement for several days. Tarry stools had been noted several times, but none recently. The patient further stated that she had occasional headaches, vertigo and biliousness. Her menstruation had been normal except for moderate dysmenorrhea. There had been no weight loss.

Abdominal examination at the time of admission disclosed moderate generalized distention and tenderness, most marked in the lower half. In the right iliac fossa was an especially tender area which gave an uncertain impression of a mass. No peristaltic sounds were heard in the right lower quadrant.

The urine showed 2 plus acetone and the blood revealed 78% hemoglobin, 3,700,000 RBC, 9,100 WBC, and 81% Polys. A barium enema was interpreted as intestinal obstruction, strongly suggestive of carcinoma of the sigmoid.

Abdominal exploration revealed an obstructive mass in the sigmoid colon; incidentally, also, a fibroid uterus. A colostomy was performed after bringing a loop of descending colon out through a short incision in the left lower quadrant.

The course following this procedure was uneventful and the patient was allowed to go home after one month. She then reentered the hospital, and a resection of that portion of the sigmoid colon containing the mass was carried out.

Pathological examination of the specimen proved it to be an endometrioma causing marked constriction of the lumen of the sigmoid.

The patient recovered rapidly from this last operation and was still free from any complaints at her last visit to our office not long ago, two and one-half years after the first admission to the hospital.

Case II. Mrs. V. H., 27 years of age, admitted with a provisional diagnosis of appendicitis. At that time she had pain which had begun in the epigastrium, and gradually localized in the right lower quadrant. She had had a previous attack about a year before and had had several attacks during the preceding five months. Temperature on admission was 99.4, and WBC 9,700 with 74% Polys. Physical examination was not remarkable except for

Read before the Jefferson County Medical Society, October 18, 1943.

tenderness to deep palpation in the right lower quadrant, especially over McBurney's point.

Operation revealed a moderately inflamed appendix and a growth involving the sigmoid. Small purplish elevations were noted on the sigmoidal serosa in the region of the mass.

Appendectomy and primary resection of the sigmoid were carried out. The patient left the table in good condition, but recovered very slowly and became very definitely septic at the end of four weeks. Two weeks later a pelvic abscess was located and drained through a lower left abdominal incision. She showed gradual improvement from then on, and was able to go home after another month had passed. She returned six months later for closure of the colostomy, recovered normally and has had no return of symptoms in over a year.

The pathological report on this case was endometriosis of the wall of the sigmoid colon with partial obstruction; chronic peri-appendicitis.

100 CASES OF EPIDEMIC MENINGITIS, DIAGNOSIS AND TREATMENT

KURT GLASER, M. D.
Milwaukee, Wis.

1943 has brought to Louisville, the largest epidemic of meningococcic meningitis ever reported in this area.

From January 1st until May 30th 100 cases were admitted and treated at the Louisville General Hospital. We have tried to analyse these cases from the therapeutic and diagnostic standpoint, thus attempting to reduce our mortality rate in future epidemics.

In our series of 100 cases all were considered as meningococcic meningitis, although we failed to obtain positive bacteriologic reports on 24 of our cases. We feel however, that we are justified in our diagnosis on the basis of the characteristic clinical and laboratory findings and the occurrence during the epidemic. 2 of these cases were meningococcic septicemias in which cases spinal fluid findings are generally negative or appear late. Unfortunately blood cultures were not obtained. Some of the other cases were transferred from other institutions and reports could not be obtained.

Here are some of the figures which might be of interest:

Sex: Female, 45; Male, 55; Color: White, 64; Colored, 36.

Age: Birth to 5 years: 27 cases
5 to 10 years: 15 cases
10 to 15 years: 11 cases
15 to 20 years: 13 cases
20 to 30 years: 10 cases
30 to 40 years: 10 cases
40 to 50 years: 4 cases
50 to 60 years: 5 cases
60 to 70 years: 5 cases
Below 20 years of age: 66 cases
Above 20 years of age: 34 cases.

SYMPTOMS: This chapter is probably the most important from the point of the practicing physician. As we know there are two main reasons for the loss of 17 patients of our series this year. The first is the relatively small number of fulminating cases and those who succumbed with complications within a few hours to 2 days from the onset of the disease and in which cases our treatment was ineffective, even when administered within the first few hours after the onset. Those cases are rare and are to be considered as lost a priori. We counted only 2 cases of this type in our series. The second group is much larger and constitutes those cases in which we physicians can play an active part in reducing the mortality rate. Those are the cases who do not consult the physician in time or who are not diagnosed properly and therefore treated only symptomatically or not at all, until striking and unmistakable symptoms make the diagnosis obvious. Unfortunately, however, for many of these patients, valuable time for the recovery is lost.

Most cases report headache as initial symptom, anywhere from few days to 2 weeks prior to other symptoms. It is perfectly understood, that in private practice lumbar puncture cannot be done on all patients complaining of headache, but it is certainly advisable to do so in cases of persistent headache. It also should be borne in mind, that during an epidemic all cases of headache should be transferred to a hospital upon the appearance of the next symptom, the neck and back ache and diagnostic lumbar puncture done. Unfortunately, a large number of these patients do not report to the doctor for these supposedly unimportant complaints. Education could bring this type of patient to the physician earlier. Upon the arrival of the fourth symptom, the vomiting without

Read before the Jefferson County Medical Society, October 18, 1943.

gastric or other apparent cause, the suspicion of epidemic meningitis is so strong that it must be considered as neglect if cases of this type are not immediately led to final diagnosis.

Here are some figures, which show in how many cases diagnosis and treatment was delayed by minimizing these symptoms.

47 cases reported headache 2 or more days previous to hospitalization, 6 cases had headache for one week or more, 27 cases reported neck and backache for 2 days or more, and 41 cases reported vomiting for 2 days or more.

It is remarkable to state the large number of cases who reported to have "colds" several days or even weeks prior to the first symptoms suggestive of meningitis. I do not believe that it is possible to say, whether the U.R.I. preceding the onset of meningitis is to be considered a prodromal syndrome or an independent disease which opens the passage for the meningococcus, probably already harbouring in the mucous membranes of the individual. According to our histories 44 cases reported to have had a cold prior to the meningeal condition. It has to be assumed, however, that not only some patients may fail to report their cold, considering it a minor ailment of frequent occurrence, but also many of our histories were obtained from relatives either because of the mental state or the age of the patient. Still more characteristic and definite is the outbreak of an eruption, usually described as petechiae, appearing immediately after the other symptoms, or in the more severe cases and certainly in the fulminating type even prior to the meningeal symptoms.

The mental state of the patient varies from absolutely clear to comatose. In the 64 cases considered their mental states were classified as follows: Irrational, 29; Semi-comatose, 16; Unconscious, 5; Comatose, 7; Lethargic, 1; Convulsions, 2; Drowsy, 2 and Stuporous, 2.

The last in my list, but by far the most characteristic symptom is the opisthotonus, beginning with stiffness of the neck and positive Kernig and Brudzinski signs. Laboratory findings of the spinal fluid were: Pressure, increased; appearance, cloudy, gray-yellow; cell count, 150000 polymorphonuclear cells; Globulin, two to four plus; sugar reduced to ten milligrams per one hundred cubic centimeters; protein increased fifty to five hundred milligrams per one hundred cubic centimeters; chloride, reduced; Gram stain, Gram negative; intracellular and extracellular diplococci, were present. Blood count, elevated white blood count, with shift to the left.

Treatment: After presenting symptoms, signs and laboratory findings, I want to present the methods of treatment employed in our series. In order to simplify the care of the patient and to make work run smoother and more efficiently in spite of the rapidly changing intern and nurses staff we have set up and followed a certain routine in the care of our meningitis patients. This routine was established according to the current reports in the literature and adjusted to our facilities and own experiences. On admission, lumbar puncture was done immediately on all patients in whom the history and physical findings pointed toward meningitis. The macroscopic appearance, the cell count and globulin contents and the primary smear with Gram stain established the diagnosis within the first 30 minutes after admission. The treatment was started while the patient was still in the examining room. We administered the sodium salt of either sulfadiazine or sulfapyridine in almost the same number of patients (SP 47; SD 52) intravenously. As a guide for the dosage we used the rule of one and one half grain of the drug per pound of bodyweight in 24 hours, divided in usually 6, occasionally 4 or 8 equal doses. The initial dose, however, consisted of half of the daily dose given intravenously. The following doses were given orally if the patient was cooperative, or by Levine tube directly into the stomach. The rectal route was used only for single doses occasionally, because of the uncertainty of absorption.

Great attention was paid to the fluid balance of the patient and the necessary intake assured by tube feeding or intravenous route.

Meningococcus Antitoxin (horse-serum) was given in 40 cases. We are not able to determine the value of the antitoxin, since we did not run comparable series. The condition of the patient was our guide in the administration of antitoxin. 14 of our 17 cases which died and 26 of the recovered cases received antitoxin. The statistics of the years before sulfa drugs were used show reduction of the death rate by administration of antitoxin. We felt therefore, that although the sulfa drugs

will reduce the number of deaths far beyond the reports of previous years, the antitoxin might help to save some of the cases, which sulfa drug alone would not cure. I understand from verbal reports, that army camps, which abandoned the use of antitoxin, returned to its use again. I personally believe, since there are no disagreeable effects of the serum reported, if the necessary precautions are used, the benefit of doubt should be granted to the sickest patient and they should receive antitoxin. It certainly would be of great interest to make comparable studies in a new epidemic and to use antitoxin on one half of the patients.

Sedation was not much used in our series, knowing that the respiratory and other vital functions are already damaged due to the meningeal condition and depression might be of harm. Because of our facilities and the restricted visiting hours it was possible to restrain patients rather than to sedate them. This might also account for the absence of obstructive signs or localized abscesses in our series. The continuous motion of the restless and delirious patient prevents formation of adhesions and pockets, which at a later date, when sulfatherapy has been discontinued, may cause new spread in the meninges. (Only one patient showed recurrence of the meningitis and succumbed, his focus of infection was the kneejoint).

Therapeutic puncture, to "relieve pressure" or to "drain pus" was not done and does not seem indicated, except in an extremely small number of cases, which show definite signs of menacing intracranial pressure.

Ad Sulfa: The dose of one and one half grain per pound was overstepped to 2 grains in some cases. The usual adult dose was 2 grams every 4 hours, which made a total of 180 grains in 24 hours. This dose was maintained for 3 to 4 days, at which time the temperature was usually normal Then this dose was reduced in adults to 90 grains per day, in children to about 1 grain per pound, and this dose maintained for about 5 to 7 days and then discontinued, provided the temperature was normal. The patient was discharged after 14 days of hospitalization, which gave us another 3 to 4 days of observation without medication. (14 days is the officially required isolation time in the state). The evaluation of sulfapyridine and sulfadiazine as to their comparable values was not done. The number of deaths was 6 for sulfapyridine and 11 for diazine. From these numbers, however, we have to deduct 4 cases which died within 24 hours after admission; their condition was such that sulfa drug was not given a fair trial. All 4 cases were treated with sulfadiazine, which makes a total on diazine of 7 deaths as compared with 6 on pyridine, which shows the equality of our findings as to the two drugs as to the death rate.

The following is an analysis of the individual cases, who died during the epidemic. The items mentioned are those which I feel contributed most to the death of the patient and made our attempts futile. Special attention is given to the contributing causes which could be avoided.

17 Out of 100 Cases Died in the Period From January to May 1943

(1) Transferred, unconscious on admission, age 59.

(2) Headache, back and neck pains and stiffness 2 days before admission. Petechiae; coma.

(3) Fulminating; Petechiae and convulsions from onset; (27 hrs)

(4) Transferred; irrational on admission; petechiae; (39 hours.)

(5) Cold, headache, vomiting: 4 days; petechiae; stuporous.

(6) Age 56; headache, vomiting for 1 week; semiconscious. Recovered of meningitis; readmitted with arthritis; died.

(7) Age 66; petechiae, comatose; died in 48 hours.

(8) Fulminating; petechiae; semiconscious, ill only 12 hours.

(9) Age 65; neck and back pains: 2 days; coma; died in 11½ h.

(10) Headache, neck and back pains for 2 days; irrational.

(11) Transferred; headache: 7 days; neck and back pains and vomiting for 3 days; convulsions; died in 38 hours.

(12) Transferred; age 69; headache, vomiting: 2 days; (36 h.)

(13) Transferred; age 65; headache, vomiting: 5 days; (6 h.)

(14) Age 50; vomiting 4 days; headache 2 days; semiconscious.

(15) Headache 3 days; vomiting 1 week; died in 21 hours.

(16) Transferred; comatose on admission; died in 15 hours.

(17) Headache for 2 days; petechiae, semicomatose.

Fulminating: 2 cases; Transferred: 6; Age above 50: 7 cases.

For the sake of improvement it seems of great importance to analyze the histor-

ies of the cases we lost with particularly critical eyes.

It seems interesting to state that 35.3% of the deaths in our series were cases transferred from other institutions, whereas only 11% of those who survived did not come directly to us. Transfer means that the case was wrongly or not at all diagnosed when taken at the other institution and after the diagnosis established shipped to us. This certainly meant great delay in treatment.

In 9 of the 17 deaths characteristic symptoms had been present for 2 or more days, which in our opinion could have led to earlier diagnosis if known to the patient or doctor. This number would be still higher if we could have obtained accurate histories of the patients who were not rational and not accompanied by responsible persons.

Whereas the above factors can be influenced by the medical profession, the following will explain from another angle why our statistics show still a relative high death rate, as compared with other reports.

7 of our 17 deaths were above 50 years of age, which shows evidence of the relative low resistance of the aged.

4 patients died in less than 24 hours, 6 in less than 36 hours and 10 in less than 48 hours. If we deduct patients who died within the first 24 hours, our death rate sinks to 13 and if we deduct those who died within 48 hours, it lowers to 7. I believe we should be granted this deduction, since patients who die in such a short time should rather be added to the list of those who did not benefit of hospital care.

The mental state of the patient throws also a light on the status in which we received them. Only 36 of our one hundred patients entered the hospital in a rational state of mind. Only one of this group died. This is by far no reflection on the medical profession, since quite a number of these patients had never consulted a physician and were brought to the hospital only after they "stopped talking" or talked "out of their head."

Resume and Conclusion

As a result of the study of 100 consecutive cases of meningococcic meningitis observed during the epidemic in 1943 in Louisville, we have come to the following conclusions.

Hospitalization of all suspicious cases is advisable and early spinal puncture to establish the diagnosis is recommended. Spinal puncture does not have therapeutic value and does not have to be repeated.

The use of either sulfapyridine or sulfadiazine in maximal doses promises good results.

The administration of antitoxin remains up to the judgment of the physician and is probably advisable in the more severe cases until further studies have definitely established its value.

Sedation should be resorted to only if absolutely needed.

The fluid balance has to be closely supervised.

The most important step toward reduction of the deathrate is the early diagnosis. Education of the public, to report early to the physician and publication of the first signs of the disease at the onset of an epidemic would bring the patient earlier into the hands of the physician or the clinic.

Medical literature and meetings could inform the medical world of the onset, progress and peculiarities of the epidemic.

DISCUSSION

James W. Bruce: I had the privilege of working with the essayist a good part of the time last year. He certainly slaved over these patients and got the best results. The best results obtained with antitoxin were by Dr. Hoyne of Chicago. It was given intravenously and after one diagnostic puncture. He had a mortality of 21%. Shortly after that, the sulfa drugs came in and the mortality was greatly decreased. In Army camps, they reported mortalities of one and two per cent with drugs and antitoxin or alone with sulfadiazine. The men in Army camps present unusual conditions, they are young, healthy adults, they get them under treatment immediately. Under those circumstances they do get remarkable results. With our patients, as Dr. Glaser pointed out, they came in after they had been sick five days or a week. The mortality occurred in the very old, they were over fifty years of age. Patients like that, they simply do not have in Army camps.

As to the use of antitoxin, my opinion is still uncertain. Since the first of July, we have had a number of cases. I will get Dr. Spegal to report to you. There was no antitoxin used, but I am very pleased with results. If antitoxin is given, it should be given intravenously and not intraspinally. Intraspinal antitoxin is a thing of the past.

Margaret Limper: I should like for Dr. Glaser to say, in his closing remarks, whether he recommends sulfapyridine over sulfadiazine,

or vica versa.

Hugh R. Leavell: In reading reports over the country and talking with health officers in crowded war communities, apparently this same epidemic situation has prevailed and it is one we will have to look forward to in the coming winter. We have a definite incentive to learn the lessons Dr. Glaser and Dr. Bruce suggested; namely, early diagnosis. When one compares the series of Dr. Glaser even with his relatively low mortality of 17%, with the various series from the Army,—one series of 170 cases without a single death, we can see the importance of seeing the patients and putting them under treatment as early as possible.

We seek your cooperation in helping prevent overcrowding. In studies during the last war, in certain areas the incidence of meningococcic carriers was 25%. With overcrowding among troops reduced, the incidence of carriers went down to 5%. In the early depression years, in transient camps here in Louisville, meningitis was a problem. When cots in the camps were properly spaced, the incidence was reduced. If you run into tenement crowding, the health department would like to hear about it so that proper corrective measures may be taken.

One thing which impressed me, particularly, in the cases reported from Army camps recently, was the division of meningitis into three stages, (1) sore throat; (2) bacteremia, with a certain proportion of the cases going onto meningitis; (3) many cases not going through the stage of meningitis. In these Army series, they were getting them before meningitis developed, in the period of bacteremia and instituting prompt treatment.

The number of cases in the country has gone down during the summer but I anticipate we will see a good many this winter.

J. G. Sherrill: The report of Dr. Glaser is one of the best coming out from Louisville in some time, and I wish to commend him for his work both in the Hospital in the care of these cases and the clarity with which he describes them. It was my privilege to send in to the General one of the cases after sending her to St. Josephs Hospital since the contagious nature caused Dr. Harry Frazer and myself to agree that she should be isolated. At our consultation the spinal tap made by Dr. Frazier at my request proved conclusively that she had acute epidemic meningococcus meningitis. When I first saw her she had a headache and was somewhat irrational, but the fact that a lady had just gone to another Infirmary with virus Pneumonia made a suspicion of hysterical excitement from fear. She was given a mild sedative at seven P. M. and this was repeated at 8 P. M. At six the next morning the conclusion was reached that meningitis was present, confirmed by Dr. Frazier positively since the tap showed great pressure and the whitish appearance of the spinal fluid. Immediately she received sulfadiazine and was taken promptly to the isolation ward of the General Hospital, where the tap again and bacterial study confirmed our diagnosis. Dr. Glaser was in charge of the ward and conducted the treatment and was able to carry her through to a recovery very promptly. I felt very grateful to Dr. Glaser and his colleagues for the care given her. Her mother came to see her and requested me to ask Dr. Frazier what his fee was. So I asked him if he had kept in touch with the patient, when he replied yes, I asked if he knew that she got well? Then he was told that her mother was asking for his bill; and that she was only one of three then in the ward who recovered. He said yes, that one who died was his patient: he also said Dr. Sherrill, I am so pleased over her recovery that I will not make any charge. My reply was that I felt the same way and would also make no charge. The gratitude of both mother and daughter was most pleasing; the outcome of this case seemed to fit into an essay I am to present before the Southern Surgical Association in December at the New Orleans meeting "Poliomyelitis, Meningococcus Meningitis and Allied Lesions of the Cord and Brain."

Gordon S. Buttorff: I should like to ask Dr. Glaser about petechiae. In the October Kentucky Medical Journal there is a report of some 80 cases of meningitis from the Medical Service of Station Hospital, Nashville Army Air Center, Nashville, Tennessee, under the supervision of Lieut. Col. A. Clayton McCarty, M. C. and 1st Lieutenant Gerald L. Infield, M. C. In their list of cases, petechiae were seen in the more severe cases and they believe that wherever they find them the case is likely to be more fulminating.

In Dr. Glaser's series, if I heard correctly, there were seven out of seventeen deaths that showed petechiae. I wonder if Dr. Glaser could tell us what percentage of those who got well had petechiae and was it his observation that those cases were more severe and fulminating.

F. W. Caudill: I should just like to say that meningococcic meningitis started increasing in the state as a whole last January. Of course, you were having a good deal here in Louisville but it was pretty well distributed throughout the state. The incidence was increased in practically all sections of the state and reached its peak in April, then began receding, reaching its lowest ebb in August. Then, in September,

it started picking up again. We have been seeing increased incidence of the disease. The same thing happened in 1935 and 1936 when we had the worst epidemic this state has ever known. During the spring of 1936, over 700 cases were reported. The mortality from the disease, calculated against the list of deaths from the population as a whole, was around 30%.

The success of treatment depends on early diagnosis to save as many lives as possible. It depends on getting them under treatment as soon as possible.

Comparing results with the armed forces, I should like to mention another phase of the thing which is important and refer to an article in the October 9 issue of the Journal of the A.M.A. by Colonel Coombs, a member, by the way, of the Class of 1931 here. In two Army camps in the South, he treated soldiers where the disease was epidemic. Before he treated these groups, he divided them into a control and treated group. He took samples to see what the carrier groups were. The groups were living collaterally in Army camps. By the sampling for carriers in both the control and the treated group, he found in the control 38% and in the treated 36%. After eight weeks treatment with sulfadiazine, in which the first experiment was 3 gms. a day for 3 days; eight weeks after completing that series of treatments for each contact, this whole military unit in which there was 36% carriers, treated with sulfadiazine eight weeks after treatment, the percentage of carriers was around 2%. He had the proof of actually culturing the same people. In the control group the carrier rate had actually increased so that you have some hope of treating carriers, certainly in a family circle, where there has been a case in a family of six or seven children. You know there is fire there. I think it would be good rationale, certainly good preventive medicine, to give each one of those close family contacts, sulfadiazine. I might say in this second group, Colonel Coombs gave only 2 gm. a day for two days and got almost as good results as with 3 gm. for three days. I want to try it sometime if we get it in some school or orphanage and treat with sulfadiazine. Meningitis is moving pretty rapidly.

Doris Spegal: I thought you might be interested, after hearing Dr. Glaser's paper, in hearing about what we found after the epidemic had subsided. There is some question about the seriousness and how fulminating our cases might be.

Since the first of July, thirty cases have been diagnosed. One case died within an hour after admission without any treatment, four cases are still under treatment. That leaves twenty-five cases to talk about. The one death was a man fifty-four years old, ill six days before admission, in coma when we saw him. He was in the hospital forty-four hours, with a temperature of 105° the whole time. He never regained consciousness, and was apparently a fulminating case.

Of the twenty-five cases, eleven had petechiae. I do not know how many of the colored patients had petechiae because I could not see petechaie in their skin.

Since the fifteenth of September, we have been drawing blood specimens for culture to find out how many had septicemia. We have been taking smears from the petechiae to show organisms in the skin. This was discussed in the Journal of the A.M.A. last month. Most of the histories, etc., were similar to the facts of Dr. Glaser. The treatment was entirely sulfapyridine, except one case which was sensitive to sulfapyridine so he is getting sulfadiazine. Massive doses were given intravenously, about 2 grains per pound of body weight in adults; in children even higher than that, 3 grains or more per pound of body weight. No antiserum is used at all. The results have been good; however, most of the cases were not quite as fulminating.

Since the first of October, nine cases have been admitted. The bacteriologist has already predicted a heavier incidence than in the spring.

W. W. Nicholson: I want to make a few remarks on diagnosis. No doubt, Dr. Leavell feels funny in telling people not to call a doctor until it is necessary, when only a few months ago, he was impressing how important it was to call a doctor early.

There are three outstanding findings in meningitis which a physician should always look for: (1) a stiff neck; (2) petechiae, and (3) a bulging fontanelle. If petechiae is present, one should always think of a meningococcus meningitis. Many other things may give a petechiae. Any patient with a stiff neck should be considered a possible meningitis and should be investigated by a spinal puncture. In infancy if the child is under one year of age, he may not have a stiff neck, but he is almost certain to have a bulging fontanelle. If we keep these three findings in mind and investigate them immediately, it will increase our early diagnosis of spinal meningitis.

R. O. Joplin: I should like to ask Dr. Glaser if he has had any cases in his series diagnosed clinically which had negative spinal fluid on the first tap and subsequently had positive spinal fluid.

About fifteen years ago, we had over 200

cases in a year's time, in a hospital in which I was interning. Any number on admission had petechiae and the spinal fluid on the first tap was clear and on subsequent spinal taps was cloudy. They were given anti-toxin intra-venously on admission and this was followed by intra-spinal treatment. The mortality in that series ran about twenty five per cent. I do not know about the new treatment and have not treated a case in years. In the first part of the series, intra-spinal treatment with anti-toxin was given every eight hours and the mortality was approximately fifty percent. We were merely drawing off serum before it had much chance to do any good. As soon as the intra-spinal treatments were changed from every eight hours to every twenty four hours, the mortality was decreased to twenty-five per-cent.

Kurt Glaser, (in closing): We did not do any second tap. If the spinal fluid was cloudy and the other findings characteristic, we considered it was positive, irrespective of the bacteriologic report.

I considered those case negative, where count, globulin and chemistry were negative.

Since Dr. Leavell mentioned distribution in crowded areas, I happened to have a map from the Health Department here which shows very nicely the distribution of the majority of cases in the most crowded parts of the city.

To the question about the petechiae. I am sorry not to have the exact number of those cases with petechiae which recovered. I am sure, however, that much fewer cases showed petechiae among the recovered patients. When petechiae occur they are a sign of a very ill patient.

In the series I reported, we did not have cases with normal spinal fluid. After May 30th there were one or two cases where the spinal fluid was negative, but petechiae led us to a diagnosis of meningococcic infection and most of those cases are fulminating and terminate fatally.

The question of sulfadiazine or sulfapyridine. I shall remark about the amount. Generally, the dose was 1.5 grains per pound of body weight but we have stepped this up to 3 grains per pound. I am unable to say whether sulfapyridine or sulfadiazine is better in the treatment of meningococcic meningitis. I have not been able to go into details in this subject. Out of the 17 deaths, 11 were treated with sulfadiazine and 6 with sulfapyridine. Out of these 11, 4 died within 24 hours, and cannot be attributed to the sulfadiazine. This means 7 died under sulfadiazine and 6 under sulfapyridine treatment, which is about the same number. I was unable to draw conclusions. There were only 8 patients with complications. The majority were treated with sulfapyridine. On the other hand there were more kidney complications with sulfadiazine. I think further studies would be of interest. In this series, I was unable to say which drug was more efficient. Just recently, I talked with a man in charge of an isolation department in another city and he was treating his cases with sulfathiazole. Sulfadiazine was not available for him. He was afraid to use sulfapyridine because of its toxic effects. There were two observations he made: (1) In contrast to reports from other institutions he did get appreciable spinal fluid concentrations; (2) as a whole, as far as mortality was concerned, he had very good results. I think that the decision of whether one or the other drug should be used is a question of the future. So far, I do not think that there is a great difference, as long as large doses are used and the patient carefully observed for toxic effects.

CURRENT TRENDS IN MILITARY SURGERY

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When I was invited to take part in your program it was decided that I should discuss current trends in military surgery. Since it seemed problematical that I would get back to this country in time to be here on this date, my associate, Colonel Carter, was put on the program in my stead. However, I fortunately had no delays in this particular trip that I have just made. Strange as it may seem, we lost only one day because of weather, and that, the flying people tell me, is unusual, because they generally count on fifteen or twenty per cent loss of time due to weather.

In July I was detailed to a Senate Committee which had for its objective a survey of the battlefronts, with the exception of Russia, because, having no installations and no troops in Russia, but having plenty of material there, we weren't allowed to include that country in our itinerary. We did get away in good time and went all the way around the world in the same plane, accomplishing the trip in about sixty-five days. The reason for that was that we were extraordinarily fortunate, as I said before, in weather conditions. I would have gone, and so would the crew, on the one day we were grounded, but one charged with responsibility for five solons dared not take off in the least cloudy

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weather, so we had to wait until the next day.

After stopping briefly at Newfoundland, we went up to Iceland, and for those of you who haven't been detailed to Iceland I earnestly hope that you do not have that fortune. We saw a lot of Kentuckians in Iceland, by the way, and all around the world. I think that actually I must have seen three quarters of the Kentucky doctors who are in service. Not only did I make an effort to see them, but they made an effort to see me, and we saw them in every theater in the whole trip.

Iceland is a place of such strategic importance that without any question the Germans would like to have had it, and had the British not moved in there early with their Navy I am not at all sure that it wouldn't have been one of the rather prominent battlegrounds in that particular part of the world.

We now feel that Iceland is not very much in danger of an attack, and I think it is perfectly fair to tell you that the reduction of the garrison has gone on until at the present time the people there are not expecting any serious difficulties. It is a bleak, unpleasant country. All that you read about it is true from the standpoint of disagreeableness, and while it has many tactical advantages, I should say that one who fought the war in Iceland would really be doing his full part if he never saw an enemy or heard a gun fired.

There are only a couple of cities of any size. Reykjavik has about 40,000 people and Akureyi has about 6,000, and the rest of the country is very sparsely inhabited. There are only about 120,000 people, all told, and fishing is the only industry.

We moved on as quickly as possible from Iceland without offending anyone's feelings, and went to England where I was enormously impressed with not only the things that had been done by the RAF and the British people as a whole, but by the things that had been done by our Army and are being done today by our Air Force.

We spent three days with General Ira C. Eaker, Commanding General of the Eighth Air Force, and because of the party to which I was attached it was possible to go through all the tactical commands and to have the situation laid out in considerable detail. I think anyone who is exposed to the Air Force very long is bound to become infected with the enthusiasm that all of these men have for winning this war all by themselves, and, as I said to General Eaker "Being a doughboy by choice I am entirely in sympathy with the Air Force winning the war without any foot soldier putting his foot on European soil, but I don't feel the optimism that you do." However, it is impossible to overstate the enormous effort that they are putting in over there and it is impossible to be too high in praise of the efforts that the Eighth Air Force have already demonstrated that they are capable of.

We saw picture after picture of bombing raids on Hamburg, Cassel, Cologne, St. Nazaire, and lots of other places, and what you have read in the press about the destruction of those places is absolutely correct. The Americans, as you probably know, have developed precision bombing to a high art. These bombardiers of ours can place bombs in a thousand-foot circle with the greatest accuracy from enormous heights, and when they have finished that off in the daytime, the British follow them along with area bombing. that is scattering bombs all over the area, letting them light where they may, and I think that's a good idea too. This is a continuous performance that goes on around the clock without intermissions and the unbelievable destruction which these people are being subjected to will make you feel very happy if you are on the other side.

I don't know whether the Air Force is going to win the war all by themselves, I sincerely hope they are, but they are doing an enormous job and all the praise that you can give them is not too much. I am heartily in favor of giving the Air Force anything it wants, because it certainly has proven itself a most destructive offensive weapon.

From England we learned a number of lessons, I think, in the training of troops, and we have a number of combat divisions over there now undergoing vigorous training for future use. I have no idea what the Staff plans are as to the cross-Channel invasion or going through the back door, but I can assure you that our troops are tough, are well trained, and will give a good account of themselves wherever they are asked to serve.

We went on down to North Africa from there. These distances that I speak of get greater and greater as you go farther around. It is a relatively short distance from Iceland to England, about four hours

by air; to go to Casablanca or Marrakesh, as we did, is about eight or nine hours in the air, and as you go across the top of Africa you find yourself hopping 1200 and 1000 miles and thinking nothing of it after you have made a few such trips. The big installations are situated at Casablanca, Oran, Algiers, Cairo, et cetera, and they are all very, very far separated from each other.

I saw a great many hospitals in Northern Africa. I saw a lot of Kentucky doctors in Northern Africa. I spent one Sunday afternoon with a group that contained some of my good friends from Lexington. Dr. Pennington, Dr. Perry and Dr. Porter were all in the 38th Evacuation Hospital. That hospital and the 12th, I believe, had been two of the busiest installations that we had in the Tunisia show, and don't let anyone get the idea that the Tunisian campaign was easy, because when you are against Germans you really are up in the major leagues. The Italian part of it didn't amount to so much when it came to combat, but the Germans are stout, versatile soldiers, hardened by long combat service and they know all the tricks, and a lot of the new tricks that they have introduced into this war make it infinitely more horrible than the last war.

I have only to mention the use of mines, at which Rommel was an expert, and I think that the opinion of military men is pretty much unanimous that the use of mines in the African campaign was one of the big factors in dragging it out for so many months. I saw many wounds from mines which were the worst wounds I think I saw on the whole trip. The Germans have some of the most ingenious agents of destruction in mines. They are not satisfied with just a mine that is exploded by concussion when you drive over it or step on it, but they have a double-barreled affair which will throw the mine up about a man's waist before it explodes, and of course that puts him out of business. I saw many double amputations, many horrible mangled people as the result of these mining operations that the Germans had carried out.

As we went all the way up from Mateur to Bizerte, all the discarded impedimenta of war was still along the road. There were tanks, German and American; vehicles of all kinds; small arms of all kinds The order is that you must stay on the road and not get more than twenty feet on either side, because the Engineers have not been able to clean up the mine fields farther than that. I have no question in my mind that these things will continue to kill a lot of innocent civilians over months and perhaps years, because they are really very widely strewn.

The hospitals that we saw there were functioning in two types, the evacuation hospitals and the stationary hospitals, the general hospitals and the station hospitals. The casualties, as you probably know, from the African campaign and from the Sicilian campaign were very much smaller than were expected and estimated by the Staff and the medical department. That is a very fortunate circumstance, of course, but everyone must be prepared for much higher casualties than we have suffered. The casualties that we suffered in the Sicilian campaign alone amounted to around 7,000. Of that group, about 4,000 were killed, and we have to revise the figures of killed, seriously wounded and lightly wounded from the last war. At that time it was twenty killed out of a hundred, forty lightly wounded, and forty seriously wounded; today it is 25 lightly wounded and 40 seriously wounded, and that is the result of mechanization, more fire power, bigger fragmentation bombs. and an entirely different type of warfare.

I saw no gas gangrene worth speaking of. They had a few cases of gas gangrene in Africa, not many; they had more in Sicily; they are having more in Italy, and I believe as we progress upward into the Continent that a repetition of the last war's experience will probably result.

I saw no tetanus. Tetanus toxoid is protective; it has been entirely satisfactory.

You don't think much of typhus here in Kentucky because you never see it or hear of it, but it is a real problem in the East, and it is endemic all through the north of Africa. We had three cases of typhus, all mild, and all recovered quickly. The British, who do not vaccinate against typhus, had quite a sizable series of typhus cases, with a very sizable mortality which I would rather not quote, but Major General Biggam, who is their Chief Medical Consultant, told me that he felt now convinced that our experiment with typhus was proven with them as the control, and he was hopeful they could adopt vaccination against typhus, just as we have.

The handling of the battle wounds I thought was splendid. There is no ques-

tion that we have better surgeons in this war than we had in the last war. These young men are better trained surgeons and there are more of them properly allocated in places where they can do surgery, and I believe that the reduction in mortality which is universal in our Army has been the result of, first, the plasma program; second, better surgery; third, the sulfa drugs; and, fourth, a number of other factors, such as transportation, good care and logistics.

I cannot be too enthusiastic over the blood plasma program. It has saved more lives in the Army from battle wounds than any other single factor, in my judgment. We have a good plasma program. We have an ample and an adequate plasma program, and I think we owe an enormous debt to the American Red Cross for the manner in which it has helped in obtaining blood and in permitting us to have all the plasma necessary. We have all the plasma we need at the present time, and we have it in the place we need it, but that does not mean that we can slacken our blood donor efforts here at home. Transportation is difficult, still difficult in spite of the U-boat campaign having been submerged, but plasma and the necessary supplies are present in adequate amounts and in the proper places, and this plasma is being given by people at collecting stations and all along the line, down to the evacuation and station hospitals where the man receives definitive treatment.

I think that all of us who have any common sense and who have any surgical experience know, and have known, that one must have whole blood under certain circumstances. There is nothing new about the cry for it. There is quite a bit of flurry about it in Britain. All good surgeons know you cannot substitute anything for whole blood in exsanguinated patients, and it is not our proposal at all that that be done. The point is that these people can be gotten back under plasma to places where they can receive whole blood if they need it, and certainly the shock can be supported from the front line on backward until they get into the hands of surgeons who are capable of handling them. I wouldn't change the plasma program one iota. I am perfectly satisfied with it, and I am perfectly open-minded and willing to be convinced about anything that is better, but at the present time we are very happy with the plasma program as it stands, realizing that it has limitations, and realizing that it must be supplemented not infrequently by whole blood transfusions.

The third factor is the use of sulfa drugs. I believe that we have learned more and more about the sulfa drugs in this war. I don't think that there is any question of their enormous value. I would not be classed as one who depreciates the sulfa drugs. On the other hand, I would be classed as a conservative who does not believe that you can substitute any kind of a medicament for good and adequate surgery in battle care. I do know that the outstanding feature of the sulfa drug program as I saw it was the abolishment of the sepsis which was such a common accompaniment of battle wounds in the last war. All battle wounds are infected in this war, all of them. It doesn't keep them from being infected to put a little bit of sulfonamide in them, but it keeps people from having sepsis and it has got to be administered, in my opinion, orally or some other way. I do not think that the local application of sulfonamide is the answer. I do think that it is an enormously advantageous thing to give these people enough sulfonamide to raise their blood level to the proper point and keep a sustained blood level as long as is necessary. Certainly it does have a great influence on sepsis. As for its local application, let us say, in compound fracture of the femur with ground up muscle and bone loss, I question very seriously if that particular application is of a great deal of importance.

One other impression that I have is that the war is entirely different in the East than it is in the West. All you have to do is to go to both places. I could bring to mind certain things that were very parallel to the last war as long as I was around Bizerte or Sicily or somewhere in the battlefields in North Africa, but the jungle fighting in the Southwest Pacific, in the Southern Pacific is something entirely new and has a very marked difference from the war on the other side.

I went up to Port Moresby where General MacArthur has his headquarters, and spent two days with him. At that time they had just taken Salamaua, and the attack on Lae was under way. Jungle fighting must be done by relatively small groups of men on islands of various size, and it starts always as an amphibious operation, which, as all you gentlemen in uniform recognize, is the most difficult

military operation that can be undertaken. There are no Engineers to put up hospitals; there are no service troops to do what service troops are supposed to do for the medical service. When the infantry lands it cuts a hole in the jungle and immediately infiltrates as far forward as it can. The next troops land and follow and cut their way up as far as they can, and when the hospitals get there the hospital people have frequently to build their own hospitals, and I must say it is a source of great pride to me to tell you that they have been doing this just as expertly as the Engineers or anybody else could do it, and just as satisfactorily.

The casualties down under are much larger from malaria than they are from battle wounds. Malaria is a devastatin disease, and everybody who goes into the jungle in combat gets malaria, and that in spite of almost anything you can do. It has got to be controlled, and I believe it will be controlled. First, it is a command function. General MacArthur is convinced of that, and he intends to control it through his medical department. That means that you must not only attack it by screening and proper huttage in the hospital areas and in the rest areas, but you must continually take atabrine while you are in combat. That sounds like a simple matter unless you happen to go up there and see one of these regiments in the line. These fellows are in foxholes, some of which are half full of water, surrounded by a jungle that seems to be filled with hostile enemies, and it is just a little bit of an imposition to ask them to remember to take a couple of little yellow pills once a day. They don't always do it, and my experience was that fewer and fewer of them did it until they got out, and for that reason it was difficult to maintain malaria discipline in the Southwest Pacific. Malaria has taken a terrible toll of our troops and it will continue to do so until we get proper measures to implement the program.

I spent five days in Hawaii. That is our principal base in the Pacific now, and it has been changed from a defensive base to an offensive base. I believe that it is the most important base in the whole world. It is to us what Singapore used to be to the British, or what they thought it was. I am sure it is one of the strongest military outposts in the world. I don't believe that we need to worry about the Japs capturing it, although it is perfectly reasonable to expect an attack, and the people out there have no delusion about the possibility of further trouble.

I can tell you very frankly that you have every reason to be proud of the efforts which the Medical Corps and which the medical profession through the Medical Corps of the Army are giving to the sick and wounded in the Army. You have every reason to be proud of the doctors who have gone out with this Army, and there are a great many of them. I haven't the figures from Procurement and Assignment, but I have an idea that Kentucky has sent 125 or 140 per cent of its quota. They are doing a magnificent job and they are doing a job that we all ought to be very grateful to them for.

Finally, I can tell you that we have not only the best equipped and the best fed and the best medically cared for Army in the world, but I believe that in the very near future it will prove itself equal to, or the superior of any other army in the world.

THE USE OF WHOLE BLOOD, BLOOD PLASMA, BLOOD DERIVATIVES AND BLOOD SUBSTITUTES

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Until the beginning of the present war, only whole blood was used as a therapeutic agent, with rare exceptions. Although war itself is catastrophic insofar as civilization is concerned, it is not without its compensatory features, and one of these is the great progress that has been made in the utilization of blood and blood derivatives, and the newer knowledge that has accumulated in this field, particularly in the treatment of hemorrhages, trauma and burns. It is now well known that the use of whole blood or plasma is the most effective agent for the maintenance of an adequate blood volume, for the correction of hemoconcentration, and for the prevention of tissue anoxia. It is recognized that shock can either be brought under control or averted by the judicious use of these therapeutic agents.

In a discussion of this type it is impossible to review the tremendous amount of material that has accumulated on this subject within the past few years. Therefore an attempt will be made to only

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briefly review some of the problems encountered in the use of whole blood, blood plasma, blood cell suspensions, and blood substitutes, with particular emphasis on indications for use, methods of preparation, methods of administration, and the unfavorable reactions that might occur.

The Use of Whole Blood: Whole blood may be collected and used in a variety of ways. Many years ago the direct transfusion was the method of choice before it was generally appreciated that citrated blood was comparable in every respect to direct whole unaltered blood. So far as we are able to determine, there are no essential differences between whole unaltered blood transfused by the direct method and the use of citrated blood, provided it is administered within a short time after it is collected.

After whole blood is collected into a bottle of citrate solution, it may be used at once or stored for use at a later date. It should be emphasized that the earlier blood is given to the recipient, the more efficacious it is, regardless of the type of solution that may be employed for its preservation. There is always a slow gradual and progressive deterioration of the essential blood components, including the tendency toward hemolysis of red cells, deterioration of complement value, lowering of prothrombin content, disintegration of leukocytes, and lysis of blood platelets. Although some solutions, particularly the dextrose citrate solutions, may retard these changes to some extent, it should always be realized that the fresher the blood is when it is administered, the better is the therapeutic result that is to be expected. Consequently, the employment of stored whole blood or the use of such blood from blood banks, will always have its limitations.

Since there has recently been such emphasis on the use of blood plasma, it seems to us that there is great danger of the utilization of plasma in many instances where whole blood is indicated. There are certain very clear indications for the use of whole blood, among which are the replacement of erythrocytes, whenever they are lost from whatever the cause, be it traumatic, or by burns, or by infection, or by hemorrhages. Whole blood should be used in conditions characterized by anemia, whether the anemia be caused by hemorrhage, excessive intravascular hemolysis, or failure of the bone marrow to produce a sufficient number of red cells. Furthermore, in view of the present day tendency to regard blood plasma as almost a specific agent in the treatment of burns, it should not be forgotten that although plasma is the agent of choice and necessity during the stage of hemoconcentration, the burned patient frequently becomes severely anemic because of intravascular destruction of red cells, and at that time whole blood comes to be the agent of choice.

Whole blood is also useful in the treatment of various types of infection, and the earlier that it is given after its collection, the more beneficial it is to the patient. It has been our experience that the use of small repeated transfusions of whole blood given daily is a valuable supplement and adjunct in the control of infection, even in some of those that are amenable to the administration of one of the sulfa drugs. In such instances not only are red cells provided that are usually destroyed in variable number in many infections, but various immune bodies as well as complement may be transferred to the recipient.

Whole blood is also valuable in the treatment of the hemorrhagic diseases, not only because of red cell replacement, but also because of the utilizable prothrombin, which, in some of the hemorrhagic diseases may be quite low, or for that matter, almost entirely absent. Prothrombin deteriorates quite rapidly in either stored blood or plasma, so whole fresh blood is the therapeutic agent of choice in these situations. Whole blood should also be used in the treatment of hemorrhagic diseases characterized by thrombocytopenia, because of the content of fresh unaltered platelets. Whole blood is the agent of choice in the treatment of hemophilia. We have recently studied a patient in whom the use of desiccated plasma and fresh plasma did not improve the coagulation rate, but in whom the administration of fresh whole blood did materially shorten the coagulation rate.

Whole blood of course should be used in carbon monoxide poisoning where oxygen carrying capacity is the most important therapeutic result.

Recently there have been reported methods whereby the patient's own blood is subjected to irradiation and then re-introduced for the purpose of controling infection in the peritoneal cavity. An instrument has been devised for this purpose which irradiates citrated blood and

returns it intravenously to the patient from which it was drawn. This procedure is still in the stage of experiment and is not applicable for widespread use.

Whole blood has been reported to be useful for local application. The report of Naide describes the local application of whole blood and plasma in 15 patients who were suffering from old, chronic, non-healing leg ulcers. He reported marked improvement in the majority of these patients and failure to heal in only four. It is of interest that the local application of blood to these ulcerated areas was characterized by rapid relief of pain and subsidence of local inflammatory reactions in all cases. It was used by simple spraying or dropping the blood on the surface of the ulcer, permitting it to clot, and then covering with a dry bandage. The author subsequently used concentrated plasma in a similar way, and found it to be equally or more effective than whole blood.

The use of whole blood transfusions is accompanied by certain disadvantages that are not present in the use of plasma. In the first place, typing and cross matching are necessary and since the usual post-transfusion reactions are caused by agglutination of the transfused blood cells, then this entire group of reactions is eliminated in the use of blood plasma. In this connection, it should be pointed out that the number of reactions occurring from the use of whole blood should considerably decrease now and in the future since the recent development of the knowledge concerning the Rh factor. It is our opinion that at least 50 per cent of reactions in the past caused by the clumping of donor's cells are on the basis of the patient having developed anti-Rh agglutinins from previous transfusions, which clump Rh positive transfused cells.

Other disadvantages of whole blood are that it must be freshly drawn and used fresh if possible, that it is not immediately available as in the case of plasma and that it can not be transported in a satisfactory manner. In addition there are certain definite contraindications to its use which should be borne in mind. Whole blood of course should not be used in any case of shock where there is marked hemoconcentration, as occurs in the early stages of burns. Furthermore, it is sometimes hazardous to overload the vascular system in certain cases of cardiac decompensation, and also in cases of severe renal damage where a slight reaction caused by the intravascular destruction of red cells might result in blockage of kidney tubules.

In order to avoid reactions from whole blood, it appears that some of the methods currently employed in laboratories for blood matching should be changed. In view of the recent work on the Rh factor, it seems to us that the slide method should be abandoned in favor of the test tube centrifuge method of crossmatching. As a matter of fact, it may be desirable to employ routinely the Levine modified compatibility test in which test tube agglutination after 30 minutes of incubation at 37° C. is considered the best single specific test for the presence of incompatibility.

With respect to the use of whole blood that has been stored in a blood bank, it is our opinion that such blood should not be used in the majority of circumstances if it is possible to obtain fresh blood. The advantages of having the whole blood readily available are obvious, but it should be reemphasized that just as soon as whole blood is collected and put into a citrate dextrose solution jar, that deterioration begins at that point, and the longer the blood is stored, the greater is the deterioration. In ten days there is a marked increase in erythrocyte fragility; the leukocyte count falls 50 per cent in the first 24 hours, and the leukocytes have entirely disintegrated in 14 days but their functional deterioration begins at once. Potassium content of red cells increases. There is loss of bactericidal activity. Complement decreases 50 per cent in three days. The blood should always be stored in a dextrose citrate solution since it has been shown by DeGowin and also by Belk and his associates that this prevents rapid deterioration.

Although it has been stated that blood should be used within 7 days after its collection, there is a gradual increase in incidence of reactions as time progresses. When giving whole stored blood to the patient it is essential that it be filtered before or at the time it is given. Various filtration agents have been used for this purpose, but none has proved to be entirely satisfactory. It is not necessary to warm the blood before it is given to the patient, since a sufficient amount of warming occurs during its passage through the intravenous equipment.

If the blood, or for that matter any blood substitute, can not be given satis-

factorily through the venous route as in cases of shock where there is collapse of superficial vessels, or in young infants, it can be satisfactorily administered by way of the sternal marrow. We have given a considerable number of transfusions by way of the sternal marrow and the results are entirely satisfactory and in at least two instances it proved to be a life saving measure where we were unable to infuse the blood into the veins. The choice of equipment for entering the sternal marrow is not very important; a great many needles of one kind or another have been devised for this purpose. Suffice it to say that a large short needle should be used. We have prepared ones that are satisfactory by cutting off spinal puncture needles to one-half inch length, and then providing a satisfactory bevel for it.

The Use of Washed Red Cells: Within the past few years considerable attention has been devoted to the use of washed red cells, that is, the cells of whole blood after the plasma has been removed. Such cells can be obtained either from freshly drawn blood, or from blood that has stood in the blood bank. Experiences with the use of red cell suspensions have been reported by a number of investigators recently, some using the cells obtained from freshly drawn blood and others using the cell suspensions obtained from blood banks after the plasma has been removed. MacQuaide and Mollison in Great Britain reported the use of cell suspensions in 50 transfusions, using blood from which plasma had been removed at the end of the 6th day. They used a relatively high concentration of cells, mixing the cells of two units of 500 cc. each, to this adding 50 cc. of saline solution containing 1 per cent glucose, giving a resulting product of over 400 cc. of a concentrated red cell suspension. They used six such bottles of cell concentrate in one patient, raising the hemoglobin from 26 to 90 per cent. The blood was not warmed before transfusion and they used only Group O blood.

Williams and Davie prepared cell suspensions containing about 8½ million red cells per cu.mm. with a corpuscular volume of 85 per cent. They gave 100 cc. of such a suspension per hour and state that the transfusion of a single bottle of this will raise hemoglobin 10 to 12 per cent. Watson used cell suspensions in which each 100 cc. contained 18 gms. of hemoglobin.

More recently American workers have reported that cell suspensions are very satisfactory for the treatment of anemia, giving on one occasion 1500 cc. of a cell suspension over a period of three hours without reaction. Blume has emphasized the desirability of using concentrated suspensions of red cells and has used such a suspension after three weeks preservation with no untoward reaction.

Evans in California used cell suspensions obtained from the Cutter laboratory where plasma was being processed. He used suspensions that were not more than three days old. The hematocrit values of his suspensions were around 90 per cent and some specimens showed free hemoglobin in the plasma. He did not have an undue number of reactions.

Reckhale and Shaar at the Naval Hospital in Philadelphia have reported 116 transfusions of cell suspensions. After plasma had been removed from the whole blood they drew off 200 cc. of cells from the bottom of the bottle into 100 cc. of 5% dextrose in isotonic sodium chloride, the final suspension containing 88 per cent of red cells. They were between 24 and 48 hours old when aspirated in this way, then stored at 2 to 5 degrees Centigrade and used before 72 hours had elapsed. Their reaction rate was low; the average rise in hemoglobin for each 300 cc. of cells was approximately one gram per 100 cc. All cases showed satisfactory clinical improvement and they point out that approximately 50 per cent of patients needing blood transfusions need only red cells and do not need plasma. It appears, therefore, that there is a very definite use for red cell suspensions, particularly in cases of anemia, but at the same time it should be emphasized that the use of cell suspensions should be rather sharply limited to that group. It certainly provides a method for utilizing a very valuable product that for the most part has been and is being discarded in the processing of blood plasma.

On several occasions we have used red cell suspensions in preference to whole blood and in our cases we had definite reasons for doing so. We drew fresh blood and immediately removed the plasma and restored our cell suspension to its original volume with salt solution and gave the blood the day it was collected. We have used these in certain patients in whom we believed we were obtaining post-transfusion reactions because of the transfused plasma. In one case at least we were

able to give successive transfusions of red cell suspensions without reaction whereas the use of whole blood was followed by severe reactions. It seems that a specific indication for the use of concentrated red cell suspensions would be cases of cardiac decompensation and severe anemias on a nephritic basis, where it is desirable to keep the total blood volume as low as possible.

The use of cell suspensions is accompanied by the same disadvantages as is the use of whole blood; that is, there must be careful cross-matching of the cells to be transfused and every assurance that they are compatible. Under no circumstances should they be used in cases of hemoconcentration. The reactions from cell suspensions are on the same basis as reactions from whole blood; that is, group incompatibility and the use of Rh^+ cells in Rh- donors who have developed agglutinins. Pyrogenic reaction would appear to be the same, and hemolytic reactions of all kinds would be the same in either case. General circulatory reactions should be much less because of the smaller volume being transfused. Transmission of infection would probably be the same, with particular reference to malarial parasites. There should be a smaller number of urticarial reactions in red cell transfusions since the unknown agent that causes urticarial reactions probably resides in the plasma rather than in the cells.

The Use of Blood Plasma: Within recent years so much has been written about blood plasma that it is impossible to review the subject here, but we shall be content with pointing out a few of the practical indications for its use, some of the problems involved in the providing of plasma, and some contraindications for its use.

The indications for the use of blood plasma are rather clear cut. It has a very definite place, mainly in shock, from whatever the cause, regardless of whether or not the shock is accompanied by hemorrhage. Secondly, the use of plasma is indicated in severe burns, to replace the proteins that have been lost from the burned surfaces. Thirdly, plasma should be used probably in all instances where there is hypoproteinemia from whatever cause, whether it be from high intestinal obstruction, faulty absorption of proteins, etc. Fourth, plasma probably should be used in some of the hemorrhagic diseases in which there is reason to believe that there may exist a prothrombin deficiency, or a deficiency in fibrinogen. Fifth, plasma can be used in cases in which there is cerebral edema from whatever cause. Sixth, plasma may be used in instances where it appears desirable to obtain diuretic action by the use of hypertonic plasma in certain cardiac conditions and in nephrosis when tissues are water-logged from extravascular leakage of fluids. Seventh, it is probable that plasma is of value in the treatment of certain infections and toxemias, particularly if it is fresh plasma.

Either fresh or old plasma may contain certain immune bodies that are stable for a considerable period of time, perhaps six weeks or longer. Complement, however, decreases rather rapidly. Prothrombin also decreases rapidly, so altogether it is better to use in infectious diseases plasma that is freshly prepared. It should be pointed out, however, that whole blood in these situations will accomplish the same results, and perhaps more too, because of the addition of new red cells.

The advantages of plasma of course are numerous. In the first place, it is easily and quickly available, not only from local blood banks but also on the commercial market. Secondly, it can be preserved and kept over a long period of time, even for a period of years, in its desiccated form. Thirdly, it is present in large quantity which is often required in the treatment of severe burns. Fourth, it can be administered without the necessity of cross-matching or typing, etc., and then, of course, it is easily transported and stored as is being so well demonstrated by its use in military establishments.

The technic for collection of plasma is now well standardized. After the plasma has been removed from the whole blood, it can then be treated by one of three methods. It can be preserved as such in liquid form, and bottled under sterile conditions, and is thereafter known as liquid or wet plasma. After it is so prepared it can be kept at either refrigeration or at room temperatures. The temperature employed is usually between 4 to 6 degrees above zero. Some blood banks keep it at room temperature and others employ refrigeration.

Secondly, the plasma instead of being preserved in its wet state can be frozen and kept in a frozen state until the time of its use. Thirdly, the plasma can be desiccated and dried to a fine powder

which of course is the method employed by the military establishments, but which is used little in civilian institutions, mainly because of a lack of equipment and facilities to carry this out.

When we speak of plasma we refer to wet plazma, frozen plasma and dried plasma. When blood is collected for the preparation of plasma, it is pooled into fairly large quantities, the yield from eight to ten donors being mixed in a large container. This reduces the possibility of reaction since any reactive substances are diluted in that way. To this is added a bacteriostatic agent, the most common one being merthiolate in a dilution of 1:10,000 or phenyl mercuric nitrate in a dilution of 1:50,000. In some banks one of the sulfa drugs is used for this purpose, such as 0.2 per cent sodium sulfathiazole. It is a matter of importance to know what preservative is in plasma since in patients requiring large amounts as in severely burned cases, there is some danger that the patient may develop mercurial poisoning from the preservative, particularly from the merthiolate or mercuric nitrate group.

There are some disadvantages of liquid plasma including a slow and progressive loss of prothrombin, complement, opsonins, and other labile constituents. Furthermore, in the course of its preparation should there be a break in the sterile technic, bacteria may gain entrance to it and multiply despite refrigeration and the presence of chemical preservatives. There is more chance of this in plasma stored at room temperature and from the standpoint of bacteriological control, it is better to refrigerate wet or liquid plasma. Refrigeration, however, causes a small amount of fibrin to be precipitated which is not so marked in specimens at room temperature.

If plasma is kept in a frozen state, the temperature employed is usually -15 to -20 degrees centigrade. When used it must be thawed quickly at 37° in order to prevent fibrin precipitation, which does occur if the product is thawed slowly. After thawing, it can be stored for several weeks if necessary with only relatively slight loss of its labile constituents.

Dried or desiccated plasma of course is that form used by the military services and the form that is commercially available. Several methods of drying or desiccation have been fairly well standardized now and it is not within the scope of this paper to go into that particular phase of the problem. The various processes have certain fundamental things in common, and that is the plasma is frozen by a system of continuous cooling coincident with the loss of latent head by vaporization, and the procedures differ essentially only in the means used to remove water vapor from the material. After plasma has been properly desiccated, it occurs as a finely dispersed powderly material to which is added the proper quantity of sterile pyrogen-free distilled water to restore it to its original volume. Prepared in this way plasma retains its therapeutic value and has no appreciable loss of prothrombin activity. It remains stable without refrigeration for a period of probably five years or more. Furthermore, it may be restored not only to original volume, but to more concentrated forms, that are servicable for use in cerebral edema and nephrosis. Each plasma unit is equivalent to approximately that found in 500 cc. of whole blood.

The Administration of Plasma: In situations where liquid and frozen plasmas are used for transfusion purposes, precipitated fibrin must be filtered out before administration. Therefore, it is essential to use a type of intravenous equipment that is capable of doing this effectively. Furthermore, the plasma must not be heated above 37° C. before its administration; it should not be used if it shows any considerable degree of hemolysis; and of course it should be given only under the indications that have already been mentioned.

The amount of plasma that should be administered varies with the clinical problem at hand. In cases of shock it is necessary to give a sufficient amount until there is clinical evidence that shock has been corrected or perhaps has been averted. In cases of burns, large quantities of plasma must be used. Certain rule-of-thumb methods have been developed indicating the amount of plasma that should be used, these including the use of 100 cc. of plasma for each percentage point above the normal hematocrit level. Another rule that has been proposed is administration of 1000 cc. of plasma in burned cases in which 10% of the body surface is involved with proportionate amounts greater.

The reactions from plasma, whenever they occur, are less severe than those seen in whole blood transfusions. Furthermore, the danger of transmission of malaria as well as syphilis in desiccated plas-

ma is practically negligible.

In concluding the brief discussion of plasma, it seems well to us to emphasize the fact that civilian institutions in the future will have to be content with the use of liquid plasma, and the major problem will be as to whether or not it should be stored at room temperature or under refrigeration, and the latter seems to be the preferable method. It is unlikely that desiccated plasma will ever come to be available on a large scale throughout civilian institutions as it is now in the case of the military establishments. It should be re-emphasized that there is danger of overuse of plasma in a considerable number of conditions where whole blood freshly drawn would serve the purpose more effectively. The indications for plasma are very limited as we have already outlined, and in spite of increased knowledge of blood plasma, by far the greater number of civilian institutions in this country do not have facilities for its preparation. Therefore, through necessity, whole blood continues to be used in many situations where plasma would be more properly indicated.

Use of Blood Serum: With respect to its protein content, blood serum has the same advantages as blood plasma. The essential difference between serum and plasma is that serum has been removed from blood that has coagulated. Consequently serum contains an excess of substances that are important in blood coagulation. Furthermore, serum in some respects is easier to prepare since it can be made sterile by Berkfeld candle filtration, and this is not true of plasma, but altogether more difficult to obtain because of standardized methods for preparation of plasma.

Furthermore, serum does not have a tendency to clot on storage as does plasma, particularly if it has been passed through Berkfeld or Seitz filters. It appears to us that there are certain hemorrhagic diseases in which serum would be preferable to plasma, and since it does contain an excess of thromboplastic elements, it may be of greater service in blood dyscrasias characterized by prolonged coagulation rates.

Use of Hemoglobin Solution from Human Blood: The use of hemoglobin solution has received emphasis recently, partly because of a desire to utilize this material which is now thrown away as a waste product from the processing of large amounts of plasma. Amberson has reported that dissolved hemoglobin takes up oxygen much faster than when it is within red cells and that it exerts colloid osmotic pressure nearly three times that of plasma protein and that of course it can be salvaged from waste red cells. He has been able to replace almost entirely the oxygen carrying capacity in experimental animals with hemoglobin in solution and points out that it may stimulate the production of new red cells.

Cannon and Redish have produced crystalline human hemoglobin and injected it into man in amounts sufficient to establish a plasma concentration of one per cent. They question very much as to whether or not this hemoglobin may produce blockage of the kidney tubules and are quite dubious as to its safety. The use of hemoglobin may be stated to be in the field of experiment at this time and is not to be recommended for clinical use.

Use of Blood Substitutes: Human Albumin: The principal proteins of blood can be roughly divided into four groups—first, the respiratory protein hemoglobin; secondly, proteins concerned with blood clotting; thirdly, proteins that bear the immune properties; and fourth, the protein or serum albumin that is primarily concerned with osmotic pressure and the control of water and electrolyte balance of the body.

It is known that this complex series of poteins can be separated by precipitation under varying conditions of temperature and hydrogen ion concentration so that separate fractions can be prepared which consist of fibrinogen, gamma globulin, prothrombin, alpha and beta globulin, and also serum albumin. During the war many efforts have been made to prepare a more purified form of serum albumin which would have the properties of being equally effective as whole plasma in shock, and which could be transported and used in much smaller bulk. Serum albumin comprises about 65 per cent of blood proteins, but exerts 85 per cent of the osmotic pressure in normal human plasma. Since it is water soluble, 100 cc. of a buffered saline solution containing 25 gms. of human albumin has about the same colloidal osmotic effect as 100 cc. of whole blood or 500 cc. of normal plasma. Methods in current use for preparation of serum albumin usually revolve around the saturation of plasma with ammonium sulfate and removal of the globulin fractions. The albumin products readily dissolve in water; they give clear solutions containing about 70 per cent by volume. When administered it seldom if ever causes re-

action. It has been found to be effective in traumatic shock and after acute experimental hemorrhage. In humans it is very effective in drawing fluids back into the blood stream. Since it is quite hypertonic it should be used only when the patient is not too badly dehydrated. At this time its greatest potential use is in the military field because of the relatively small volume of material required. For civilian use its use is impractical for the simple reason that it is not available.

Bovine Albumin: Since beef plasma is quite abundant, numerous efforts have been made to obtain a type of bovine albumin that would be equally satisfactory as the human type and at the same time obtain a product that is non-toxic. The work of Cohn and his associates have shown that human and bovine albumins have a molecular size that is remarkably similar and that the electrical charges of these proteins and the blood reactions are similar. It has been found that a 5 per cent solution produces and maintains a satisfactory hemodilution after acute hemorrhage in human subjects, and that it does not appear in the urine. One report relates the administration to 16 human subjects, one receiving as much as 29 gms. without immediate reaction. Four of these developed positive skin tests and serum occurred in two, both of whom had previously had horse serum. Three of these subjects were re-injected two and one-half months later without untoward incident, and food sensitivity to beef had not been observed in any subject. All of this indicates that eventual purification of the product may be brought about to such an extent that such substance may eventually be available for widespread use.

Acacia: For many years other products have been used that were designed to exert a colloidal osmotic pressure within the vascular system so that they would be suitable as substitutes for blood plasma. One of the oldest is gum acacia which for many years has been used intravenously in a 6 per cent solution. It has been unsatisfactory however because it is not the equal of the natural product in this respect and it is quite toxic, particularly if fairly large amounts are used. It does have definite antigenic properties. Furthermore, it may be deposited in hepatic cells and cause death from liver insufficiency. Also it fails to provide protein material which is urgently needed in the blood.

Gelatin: Another substitute that has been proposed and used is gelatin, but has been discarded mainly because of its known antigenic properties. Taylor and his associates have devised a method of obtaining a highly purified fish gelatin or isinglass, so as to yield a readily soluble powder which has been used in experimental shock in dogs for which it does not appear to be antigenic, but sufficient experience with this substance in human beings has not accumulated for any worthwhile conclusions.

Pectin: A substance which has attracted considerable interest is pectin, which was first proposed by Hartman and his associates at the Henry Ford Hospital. The material is derived from citrus fruit. It is a colloidal carbohydrate of high molecular weight which is found in plant cells in combination with cellulose from which pectin is separated by hydrolysis. After addition of electrolytes and proper adjustment, it is prepared for intravenous administration after autoclaving and adjusting to a final pH of 7.2. A solution of one-half per cent of pure pectin has approximately the same viscosity and osmotic pressure as the blood. It appears to be non-toxic, and when given intravenously is eliminated by the kidneys in about 72 hours. Studies thus far indicate that it is not antigenic, and that it has definite value in the treatment of shock in human beings. It is still in the stage of clinical experiment, but in the event that it eventually proves to be satisfactory substitute for plasma, no doubt it will be widely used because of its ease of preparation.

Casein Digest: Certain protein digests, particularly casein digest, are not blood substitutes in the sense of serving for restoration of blood values in the emergency treatment of shock. They are valuable, however, for more prolonged treatment of hypoproteinemia, whether resulting from trauma or malnutrition, provided the tissues can be aided to produce new plasma proteins. The material is prepared by digestion of commercial protein for several days with the final digest being a golden yellow granular material which is made into a 10 per cent citrated solution for infusion purposes.

Maddin and associates have reported that certain of these digests with a molecular weight around 500, when given to dogs by vein or subcutaneously, are as effective as protein by mouth in building new plasma protein. Hopps and Campbell have reported that some of the preparations of casein hydrolysates were non-antigenic.

Muscle Extract: There has recently appeared a report in the German literature by Bucher on the preparation of an extract from fresh skeletal muscle tissue obtained from cadavers in which he used a calcium free tyrode solution as the solvent. He claims that it is a valuable blood plasma substitute and that the addition of a small amount of blood serum increases the stability of the myogen fraction, making it possible to preserve the extract over long periods of time without deterioration. Another advantage claimed for this muscle albumin solution is that it is not toxic and can be used parenterally without danger. The author claims that as much as 40 per cent of the blood volume can be replaced with the solution and injected it into himself on ten different occasions with no resulting sensitization, based on negative intradermal tests. He reports that the duration of the muscle albumin in the blood is rather prolonged, extending over a period of several days during which time it can exert its osmotic pressure effects, thus being valuable in obviating delayed shock. The author states that a detailed description of the experiments are to follow in later articles and that international patents have been obtained on the substance.

The experimental work and clinical use of all of these blood substitutes is in active progress in many investigative centers, but none as yet has proved to be as effective as plasma or whole blood in most of the clinical states in which blood substances are needed.

BLOOD AND LYMPH

W. E. McWilliams, M. D.
Brodhead

I think it very essential to know the normal blood and lymph to fully understand pathological conditions. Inasmuch, as alterations in blood and lymph composition may result in wide spread physiological and pathological changes, it is of value to know the average composition of blood in order to understand the effects of deviation from normal averages.

Blood makes up eight per cent of the body weight. It is a circulating tissue consisting of a fluid portion called plasma in which are suspended three types of formed elements, red blood cells, white blood cells and platelets. Dissolved in plasma are gasses and solid materials. The formed elements make up forty five per cent volume of human blood and plasma fifty five per cent.

Read before the Rockcastle Medical Society.

Blood has six functions in the body. It carries food from the intestines to the tissues and oxygen from the lungs to the tissues. The food materials are in solution, and the oxygen is carried in loose combination with hemoglobin of the red blood cells as oxyhemoglobin. Blood carries the waste products to the kidneys, lungs, skin and intestines. It transports the hormones from the place of elaboration to the seat of action. It brings about a uniform distribution of heat and thus aids in the regulation of body temperature. Last, but by no means least, because of its bacteriologic antibodies, it forms a front line of defense against disease.

When whole blood is spun down in a centrifuge so that the fluid and solid parts are separated, it divides into formed elements and plasma. If it is allowed to coagulate or clot, it is separated into formed elements and serum which is plasma minus fibrinogen, the fibrinogen having been used up in clot formation.

The red cells are the oxygen carrying cells or corpuscles. The white cells are disease resisting cells. The platelets participate in clot formation. The red cells are the heaviest portion of the blood and after centrifugation, it stands in the bottom of the tube as a thick, red, gelatinous mass, while the white cells appear as a thin, creamy layer on top. The platelets are not visible.

The red blood cells vary in normal blood depending upon age, sex, activity and hydration of the individual. There are approximately five million cells per cubic centimeter. The number present, as well as their structure by blood count, i. e., microscopic examination are factors of diagnostic value.

The hemoglobin, a portion of iron compound, is the red coloring matter of the red cells. The iron content of the hemoglobin gives it the property of carrying oxygen without itself being oxidized. If the percentage of hemoglobin or the total number of red cells are below the average in number, the oxygen carrying capacity is affected and anemia results. Hemoglobin unites with oxygen to form oxyhemoglobin, which is a brilliant red. As arterial blood leaves the lungs, it is bright red in color, due to this oxygen content. After circulation and removal of oxygen by the tissues and taking up carbon dioxide, the

tissue waste product, it returns to the lungs as purplish or dark red venous blood due to its low oxygen content and its reduced hemoglobin. In the lungs, carbon dioxide is expelled and oxygen is taken up and the blood starts another trip around the body. A drop of blood makes a complete circuit in 20 seconds.

The red blood cells originate in the red marrow of the bones. A constant output of one billion per minute must be maintained if balance is to be maintained between cell production and cell loss by disintegration. The life of red blood cells is very short. About one fifth of the total number is destroyed daily.

The white blood cells are living nucleated cells present in normal human blood about seven thousand per cubic centimeter. An increase above these, if transient, is known as leucocytosis and where prolonged, it is known as leukemia and a decrease is known as leucopenia. Certain white blood cells arise in the bone marrow. Others have their origin in the lymph nodes. A persistent leucocytosis is associated with change in the bone marrow or in the lymphatic glands. Several types of white blood cells are recognized and the preponderance of one over another serves as a diagnostic sign, as does the total variation from the normal level. Injury to body tissues or bacterial invasion, immediately causes a migration of white blood cells to the injured part where they engulf irritating particles. The power to combat bacteria is due to enzymes in the cells themselves. Because of this ability, they are often referred to as "Policemen of the human body." Pus is the dead bodies of the white cells which have given their lives in an effort to combat infection.

The platelets number about three hundred thousand per cubic centimeter of blood. They are the smallest of the three formed elements, although their function is not entirely understood. They probably aid in the change of soluble fibrinogen to insoluble fibrin for the formation of blood clots.

Clotting of blood is the mechanism which prevents complete outpouring of blood when a blood carrying vessel is lacerated, bruised or cut. This is a rather complicated procedure and many factors play a part. The original presence of calcium salts and an antithrombin in the circulating blood, the fibrinogen which is in soluble form becomes converted into insoluble fibrin, a threadlike mass of protein enmeshes the blood vessels and forms a clot. Recent vitamin studies reveal that vitamin K is essential in the clotting of blood. If vitamin K is absent from the blood stream, clotting is prolonged. Administration of this vitamin corrects the difficulty at once.

Blood is not the only liquid that transports material to different parts of the body. The lymph, a form of blood serum, bathes all body tissues. It is the fluid outside the blood vessels and around the body cells. Lymph between organs and body walls is known as pleural, peritoneal or tissue fluid. There are no vessels corresponding to arteries, veins or capillaries in the lymphatic circulation. There are, however, small tubes called lymphatics that begin in the open spaces between capillaries and cells through which lymph flows slowly from all parts of the body toward the thorax where the lymphatics which have been uniting again and again form one big tube—the thoracic duct. The duct empties into the venous blood system at the junction of two large veins in the neck. Sixty percent of fat absorbed from the intestinal tract may be recovered from the thoracic duct. In the process of absorption, the digestive end products that pass into the villi must pass through the lymph space before entering the capillaries. While most of the material passes into the capillaries, part of the fat remains in the lymph to be carried away by the lymphatics, eventually joining the blood stream by way of the thoracic duct. Along the lymph stream are small seed like bodies which are called lymphatic glands. They play an active part in the control of infection, acting as strainers for the lymph passing through them.

I cannot give this subject justice in a paper like this. Blood pressure, blood count, pulse of different varieties, different forms of hemorrhage, blood examination and blood transfusion, and many other things should probably be considered here, but if we make a thorough study of all of these and put them into general practice, life may be saved, strength preserved and life lengthened.

The Medical Director at the Kentucky State Selective Service Headquarters says that out of every seven men examined in this state, four are accepted, two are rejected for physical reasons, and one is rejected for mental or educational deficiency.

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NEXT ANNUAL MEETING LOUISVILLE 1944

COUNTY SOCIETY REPORTS

Boyd: At the meeting of the Boyd County Medical Society held December 7, 1943, the following officers were elected: Proctor Sparks, President; Leslie Urban, Vice-President; C. K. Kercheval, Treasurer; Price Sewell, Jr., Secretary; Sam Smith, Delegate for two years; J. D. Williams and H. R. Skaggs, Alternate Delegates.

There was some confusion as to who was serving as censor due to a lapse in the minutes of previous years. It was decided that T. D. Goodman and L. H. Winans were serving. They resigned from office and the censors were elected as follows: W. H. Rice to serve three years; T. D. Goodman to serve two years; L. H. Winans to serve one year.

The following members were appointed to the Committee on Public Health and Legislation, C. K. Kercheval, Price Sewell and H. R. Skaggs. Harry Stambaugh was recommended for referee.

Price Sewell, Jr., Secretary

Campbell-Kenton: The regular monthly meeting of the Campbell-Kenton County Medical Society was held at St. Elizabeth Hospital on December 2, 1943, with seven members present. The meeting was called to order by the president, Dr. N. A. Jett at 9:10 P. M.

The minutes of the last meeting were read and approved.

Letters of thanks were received from the National Malaria Society and the American Academy of Tropical Medicine for our hospitality shown at their joint meeting with the Southern Medical Association in Cincinnati, O.

A letter was received from Mr. F. P. Fish relative to setting a limit on additional ration points and recommending the approval of the plan as adopted by the War Price and Rationing Board No. 115 of St. Louis, Missouri.

Charles Baron moved the plan be approved by the society. The motion was seconded by Dr. O. W. Frickman and passed.

The monthly bulletin from the Kenton County Chapter of the American Red Cross was received.

A resolution adopted by the Scott County Medical Society opposing the Wagner-Murray-Dingell Bill was read.

The following officers were elected: President, O. W. Frickman; Vice President, George Burger; Secretary, Robert L. Biltz; Treasurer. J. D. Northcutt.

Board of Censors: Charles Baron, three years; S. P. Garrison, two years; F. E. Bell, one year.

Dr. Bach suggested that the election of delegates be deferred until a later meeting.

There being no further business, the meeting was adjourned.

Robert L. Biltz, Secretary

Four-County Medico-Dental Society: The Four-County Medico-Dental Society met in quarterly session on Tuesday night, November 23, 1943, Cadiz, Trigg County, and following supper at the Cadiz Hotel, G. E. Hatcher, Cerulean, in the absence of both the President and Vice-President, called the meeting to order and the minutes of the previous meeting, held at Kuttawa, Lyon County, were read by the Secretary and approved. Communicable Diseases were discussed by Capt. E. E. Martner, Medical Corps, Camp Campbell, and "Cardiology" was discussed by Major H. K. Eynon, Medical Corps, Camp Campbell. A general discussion followed and valuable points were elicited. T. Atchison Frazer, having recently been elected as Councilor, First District, State Medical Association, was called upon and responded by outlining his purposes in carrying out the duties of his position and solicited the co-operation of all concerned.

In addtion to the Essayists, Capt. Martner and Major Eynon, the following were in attendance: Major C. A. Gaffin, Camp Campbell, E. N. Futrell, N. C. Magraw, Cadiz; Paul L. White, Bumpus Mills, Tenn.; C. P. Moseley, D. J. Travis, T. W. Lander, Eddyville; G. E. Hatcher, Cerulean; L. A. Crosby, T. Atchison Frazer, Perry J. Frazer, Marion; W. C. Haydon, Power Wolfe, W. L. Cash, Princeton.

The Society adjourned to meet again on the Fourth Tuesday night in February, 1944, Princeton, Caldwell County, with W. C. Haydon, Princeton, in charge of the arrangements.

W. L. Cash, Secretary

Henry: The regular meeting of the Henry County Medical Society was held at the Castle Hotel, New Castle, December 14, 1943, at 7:30 P. M. Dr. F. D. Hancock was host and a delicious dinner was served. Dr. Otto Cubbage asked the blessing and the following were present: G. E. McMunn, F. D. Hancock, R. J. Skidmore, Maurice Bell, A. P. Dowden, A. G. Elliston, W. W. Leslie, Otto Cubbage, W. F. Carter, J. C. Hartman and Owen Carroll.

Guests present were: J. B. Lukins, guest speaker; Lanier Lukins, Mrs. G. E. McMunn, Mrs. F. D. Hancock, Mrs. R. J. Skidmore, Mrs. Maurice Bell, Mrs. A. P. Dowden, Mrs. A. G. Elliston, Mrs. W. W. Leslie, Mrs. Otto Cubbage, Mrs. W. F. Carter, and Mrs. Owen Carroll.

The Secretary read the minutes of the previous meeting and they were approved as read. The Secretary read a resolution drawn by a committee consisting of W. W. Leslie, Maurice Bell, J. C. Chapman and Owen Carroll, which committee was appointed at the November meeting, and which resolution stated clearly the Society's opposition to the Wagner-Murray-Dingell Bill, which bill, if passed, would socialize medicine and regiment physicians. The resolution was unanimously approved, and the Secretary was instructed to send copies of the same to our Representatives in Congress.

It was decided that the election of officers, regularly scheduled for each December meeting, would be postponed until the January meeting.

Owen Carroll was asked to introduce the guest speaker, J. B. Lukins, who read an excellent paper on "The Physician's Part in Total Warfare." He paid particular attention to the leading causes of death, particularly to cancer. Dr. Lukins' son, Lanier Lukins, showed slides bringing out many of the major points discussed in the paper. Following Dr. Lukins' paper and the showing of the slides, round table discussion was held, and all expressed their deep interest in Dr. Lukins' subject and the way in which he handled it. It was noted that Dr. Hartman would be host for the January meeting.

There being no further business the meeting adjourned.

Owen Carroll, Secretary

Harrison: The regular meeting of the Harrison County Medical Society was held at Biaucke's Annex September 10, 1943.

Dr. C. L. Swinford, president of the society, has been instrumental in bringing outstanding physicians for presentation of papers and movies on pertinent medical subjects and has been personally defraying the expenses incident to the excellent meetings. Dr. Swinford presided at the meeting.

Following the singing of "God Bless America," accompanied by Miss Virginia Hutton on her accordion, Robert M. Pope gave the invocation and then the lovely dinner was enjoyed

The group rose for a moment of silent prayer in tribute to the late Dr. N. W. Moore, former member of the society, and Dr. A. T. McCormack, who before his death was secretary of the State Board of Health.

Federal Judge Mac Swinford, brother of the society's president, extended a cordial welcome to all the visiting doctors and guests, and praised them for the wonderful spirit with which they are doing double and even triple duty during the war emergency in which there is in many communities a terrible shortage of doctors. He praised them for their part in keeping up the home front, and challenged them to

a continued unstinting giving of their active services.

The society meeting was honored by the presence of Dr. Phillip Blackerby, secretary of the State Board of Health and editor of the Kentucky Medical Journal. He commended Judge Swinford for the part he played while in the Kentucky legislature in defeating a ripper bill that would have placed public health in Kentucky in politics. He likewise was loud in his praise of Dr. Swinford for his sponsorship of the high type medical meetings that have been held here. He solicited the continued support of the various societies throughout the state, and he promised his own best efforts in his new office. Pointing out that the State Board would make an increased effort to plan and co-operate with the societies, he asked that the various scientific papers be preserved to the end that they might be published in the state medical journal and thereby benefit the entire profession. The doctors here were urged to attend the state medical meeting at Louisville in October, announcing that many outstanding medical men would be present and that that meeting would be as fine a post graduate course in several days as could be obtained any place in the country.

The showing of a movie "Appendicitis in Childhood," by W. T. Waller, Cincinnati, for the Mead Johnson Co., Evansville, Ind., was the subject of a lively discussion on the part of many of the physicians, Dr. J. M. Rees leading the discussion. The movie was a medical paper by Dr. James Brannamann, famous child specialist. Dr. Dan Reddish, Lexington, suggested that an innovation he found at Rawleigh, N. C., be practiced more generally by drug stores and that all physicians make it a point to educate the public concerning the use of cathartics and the dire effects that might be expected when used in cases of abdominal pain. The drug stores were urged to display signs advising the public not to use cathartics in cases of abdominal pain except with specific instructions from the attending physician.

Dr. W. B. Moore, secretary of the local society, was largely instrumental in securing Dr. W. R. Miner, Covington, to give a paper on "Posterior Trans-urethral Resection in Prostatitis." This topic, likewise subject to diverse viewpoints, and the presentation by Dr. Miner brought out a splendid discussion.

Prior to the serving of the meal and the program proper, a social session hour was held during which time the fellowship was greatly enjoyed.

Dr. R. L. Loftin, head of the Harrison County Health Department, acting for the president, thanked those who had made the meeting a success by their attendance, discussion and who otherwise contributed to the success of the program. Edward Cason was present and took a number of photographs of the meeting.

Among those in attendance were: Drs. W. R. Miner and J. L. Northcutt, Covington; Drs. E. Asbury, A. F. Leedy and Mr. W. T. Waller, Cincinnati, Dr. P. E. Blackerby, Louisville, Drs. O. W. Brown and W. A. McKenney, Falmouth; Drs. V. W. Corbin and J. M. Blades, Butler; Drs. Tom Marks, Charles Vance, H. G. Herring, W. D. Reddish, Douglas E. Scott, Charles D. Cawood, Chas. G. Baker, Lexington; Drs. L. T. Lanham and R. R. Linville, Mt. Olivet; Drs. J. C. Hart, J. A. Orr, Geo. M. Jewell, Paris; Drs. H. R. Henry and W. Carl Grant, Winchester; Drs. B. F. Reynolds, T. H. Brown and T. P. Scott, Carlisle; Drs. A. F. Smith and Harry V. Johnson, Georgetown; Dr. M. D. Swinford, Scott County; Judge Mac Swinford, Robert M. Pope, Drs. Chas. L. Swinford, H. C. Blout, J. M. Rees, W. H. Carr, Attorney J. Thaxter Sims, James G. Wilson, J. M. Keith, Lloyd Rogers, Hubert Hutton, Drs. H. F. Midden, F. G. Hedges, L. N. Todd, Paul B. Lail, W. B. Moore, J. P. Wyles, J. P. Chamberlin, R. T. McMurtry, J. B. Beck, D. E. LaBore, Dr. and Mrs. R. L. Loftin, Mr. and Mrs. Harry Ready, Miss Virginia Hutton, Mrs. Della Mardis, John Mayer, Houston Renaker, E. K. Watkins, John Smitson, Miss Jo Nell Peterson, technician, and Miss Franklin, head surgical nurse at the Harrison Memorial Hospital.

W. B. Moore, Secretary

Harrison: The annual meeting and dinner of the Harrison County Medical Society was held at the Hotel Harrison December 6, 1943. Members present were: Drs. Loftin, Chamberlin, McMurtry, Swinford, McIlvain, Wyles, Rees and W. B. Moore. Visitors were: J. A. Orr and Clark from Paris. The meeting was called to order by the President, C. L. Swinford, for the purpose of electing officers for the ensuing year. The result of the election was: J. P. Wyles, President; J. P. Chamberlin, Vice-President; W. B. Moore, Secretary-Treasurer. J. P. Wyles was chosen Delegate to the State Association. The retiring members of the Board of Censors were re-elected.

Motion made, seconded and carried that the dues of the members in the Armed Forces be omitted. Motion made, seconded and carried that the Secretary be instructed to send holiday greetings by wire to Drs. Brumback, Moody and Smiser who are in the armed forces. There being no further business, the meeting adjourned.

W. B. Moore, Secretary

Rockcastle: The regular meeting of the Rockcastle County Medical Society met at the home of Dr. and Mrs. W. E. McWilliams, Brodhead, Friday night, October 1, 1943. After a very fine dinner prepared by Mrs. McWilliams the scientific session began at 8:15 P. M. Demonstration of the Glucose Treatment Of Eclampsia by T. A. Griffith. Dr. James Pennington, Jr., Doctor of Dental Surgery, was the guest speaker, his subject was The Teeth Foci of Infection. This proved to be a very interesting paper and was discussed freely by the members. Young Dr. Pennington will leave this month for Naval Service.

Dr. James Pennington, formerly of Ford, Clark County, but now located in Mt. Vernon, was elected a member of our society.

It was voted to hold our next regular meeting at the home of Dr. and Mrs. Owens, Mt. Vernon.

Meeting adjourned at 10 P. M.

R. G. Webb, Secretary

Rockcastle: The Rockcastle County Medical Society held its regular monthly meeting at the home of Dr. and Mrs. Walker Owens, Mt. Vernon, Friday evening, November 5, 1943. From an eating and attendance standpoint this was one of the best meetings of the year. Mrs. Owens and her assistants spared no time or expense in giving us hungry doctors and our wives a wonderful 7 o'clock dinner of home grown baked chicken and all the trimmings

The scientific session was called to order by Dr. Owens, Vice President, at 8 P. M. There being no regular paper for this meeting the time consumed consisted of case reports on the new eye disease, Keratoconjunctivitis, and its treatment. Several cases of interest were reported by the members.

The surprise of the meeting was brought on when Dr. R. G. Webb, of Livingston, in an extemporaneous speech on student medical qualification agreed with Dr. Smock of Louisville, that we should turn the clock back and allow young men who had it in them and wanted to be doctors to enter Medical Colleges after they had finished High School. Under the present set up the pendulum has swung too far and if we are going to have young men to fill our places in the small towns, as general practitioners, we must reduce the time and cost, under the present set up, why spend 14 years of the best part of your life going to school and then five years or more building up a paying practice when you learn another paying trade in two years. Unless we do this your money is wasted fighting socialized medicine, for it must and will come, the people in the small towns and rural districts must have medical attention and the young men who have spent the best part of their lives studying and all the money their parents could make are not coming to us.

Every doctor present had his say and it was voted to pass the discussion on to the next meeting and to take a vote on same.

There being no further business meeting was adjourned at 10:30 P. M.

R. G. Webb, Secretary

Rockcastle: The Rockcastle County Medical Society, continuing its policy adopted in July of holding its meetings at the homes of its members thereby helping out in the food and labor shortage, met with Dr. and Mrs. R. G. Webb, Livingston, Friday, December 3, 1943. A real Thanksgiving turkey dinner was served a little late due to the late arrival of some members. I can safely say that no one went away hungry.

The scientific session was called to order by Dr. Walker Owens, Vice President, with the following members present: Drs. McWilliams and Garret of Brodhead; Griffith, Pennington and Owens, Mt. Vernon; Lewis of Wildie, and Webb of Livingston; after the reading of the minutes of the last meeting the President called for the reading of the paper by Dr. W. E. McWilliams: Subject, Blood and Lymph. His paper proved to be very interesting and was freely discussed by all present.

Several members reported very interesting cases. Dr. McWilliams reported one Tularemia case, the only one so far that has been reported in the county this year and since the hunting season opened. Due to the time of night it was decided the further discussions and vote on student qualification be passed to January meeting. This being the last meeting of the year the election of officers was the next in line with the following results: President for 1944, R. H. Lewis, Wildie; Vice President, J. F. Pennington, Mt. Vernon; Secretary, R. G. Webb, Livingston.

Motion made by T. A. Griffith of Mt. Vernon, that the Rockcastle County Medical Society in regular session in the city of Livingston go on record as opposed to the Wagner-Murray-Dingell Bill. Seconded by Dr. McWilliams, of Brodhead, vote taken and carried.

There being no further business the meeting adjourned.

R. G. Webb, Secretary

Scott: The Scott County Medical Society held its regular monthly meeting at the John Graves Ford Hospital with the following present: Drs. A. A. Amerson, W. S. Allphin, E. C. Barlow, P. H. Crutchfield, L. F. Heath, H. V.

Johnson, H. H. Roberts and A. F. Smith. At the annual election, the following officers were installed: President, L. F. Heath; Vice President, A. A. Amerson; Secretary and Treasurer, H. V. Johnson; Delegate, W. S. Allphin; Alternate, H. H. Roberts; Censor, A. F. Smith. After a delicious dinner served at the hospital, an interesting talk was given by Dr. L. E. Smith of the Department of Health on the subject of Tuberculosis.

The meeting adjourned until the First Thursday in January.

A. F. Smith, Secretary

Clay: The Annual Meeting of the Clay County Medical Society was held in Manchester at which time the following officers were elected: President, D. D. Turner; Vice-President, G. P. Webb; Treasurer, L. H. Wagers; Secretary, L. H. Wagers; Delegate, L. H. Wagers; Board of Censors, L. H. Wagers and D. D. Turner.

L. H. Wagers, Secretary

Garrard: The Annual Meeting of the Garrard County Medical Society was held at which time the following officers were elected: President, B. B. Montgomery; Vice-President, J. L. Hart; Treasurer, J. E. Edwards; Secretary, J. E. Edwards; Delegate, J. E. Edwards; Board of Censors, J. E. Edwards and V. G. Kinnaird.

J. E. Edwards, Secretary

Shelby: Dr. E. B. Smith was host to the Shelby County Medical Society on November 18th. After meeting in his office the Society was invited to the Colonial Inn where a delightful steak dinner was served to the following members: Drs. Collins, Hughes, Carroll, Richeson, Sleadd, Dowden, Leslie, Weakley, Smith, Nash, Skaggs, Bell, McMurry, Simpson and Risk.

President Bell called the meeting to order and the minutes of the last meeting were read and approved.

The Secretary read a letter from the Christian County Medical Society in protest of the Wagner-Murray-Dingell Bill that is in the hands of the Ways and Means Committee in Congress. No action was taken on the letter but the Secretary was instructed to write the Senators and Congressmen in protest of the bill in its present form. All members present signed the letter.

At this time the President turned the meeting over to Dr. Smith, the host, and he introduced Dr. Virgil Simpson of Louisville. Dr. Simpson gave an excellent talk on the sulfa drugs. The paper was freely discussed.

A motion was made to adjourn. The next meeting will be on December 16th, when Dr. Simpson will entertain at his home on the Taylorsville Road.

Mrs. Elizabeth Davis Buckner, wife of Dr. W. T. Buckner, Shelbyville, died December 2.

C. C. Risk, Secretary.

Union: The Union County Medico-Dental Society met at Calvert's Restaurant in Morganfield, at 7:00 P. M. Tuesday, December 7, 1943. After the meal the society went to the office of the Union County Health Department for the showing of the colored motion picture, Peptic Ulcer produced by John Wyeth and Company. There being no further business meeting adjourned.

Those present were: G. B. Carr, H. B. Stewart, J. W. Conway, D. M. Sloan, and Bruce Underwood.

Bruce Underwood, Secretary

NEWS ITEMS

Doctor O. B. Humpton, 87, a physician for sixty years at Franklinton, died December 19, after a year's illness.

Dr. James Pennington, formerly of Ford, Clark County, is now located at Mt. Vernon.

Dr. Carl Weidner, Sr., 86, who retired in 1934 after teaching and practicing medicine in Louisville for fifty-five years, died at 7:45 p. m., December 15th.

Dr. Weidner was born in Germany and came to the United States in 1874. He worked as a druggist in Louisville and Detroit until 1881, when he was graduated from the old Kentucky School of Medicine. In addition to practice, he taught medicine here from 1888 to 1920.

The Southern Chapter of the American College of Chest Physicians was organized at the Hotel Gibson, Cincinnati, November 18, 1943. The following officers were elected: President, Paul H. Ringer, Asheville, North Carolina; First Vice President, Alvis E. Greer, Houston, Texas; Second Vice President, Carl C. Aven, Atlanta, Georgia; Secretary-Treasurer, Benjamin L. Brock, Waverly Hills, Kentucky. Introductory remarks were made by Dr. J. Winthrop Peabody, Washington, D.C., President of the American College of Chest Physicians, and Dr. Evarts A. Graham, St. Louis, Missouri. Dr. Benjamin L. Brock, Louisville, presided at the organization meeting, at which time the constitution and by-laws for College chapters was adopted.

Dr. Helen Jeffery Kelly announces opening of offices at 517 Fincastle Building, Louisville, for the practice of general medicine.

Dr. Kelly will be remembered as the Director of the School of Laboratory Technique and later an Assistant to the Director of the Bureau of Bacteriology of the Kentucky State Department of Health. She is a graduate of the University of Minnesota School of Medicine (1939) where she studied haematology under the guidance of Dr. Hal Downey. She has also done graduate work in fungus diseases at the Department of Medical Mycology of the New York Medical Center, under the direction of Dr. J. Gardner Hopkins and Dr. Rhoda Benham.

At the suggestion of the Medical Division of the U. S. Office of Civilian Defense, to prevent dangerous delay in diagnosis and to insure proper treatment during unconsciousness or coma, Eli Lilly and Company, Indianapolis 6, Indiana, in co-operation with the American Diabetes Association, will provide metallic indentification tags to be worn by diabetic patients or carried in the pocket. The inscription reads "DIABETIC, If Ill Call PHYSICIAN." No advertising of any sort appears on the tags, which will be supplied to the medical profession on request.

BOOK REVIEWS

RADIOLOGIC PHYSICS: By Charles Weyl, Reid Warren, Jr., Dallett B. O'Neill, Moore School X-ray Laboratory, Moore School of Electrical Engineering, University of Pennsylvania. With a foreword by Eugene P. Pendergrass, M. D., Director of the Department of Radiology, University of Pennsylvania, Charles C. Thomas; Publisher, Springfield, Illinois; Baltimore, Maryland.

The authors of this book, all of whom are now engaged in teaching radiation courses have made extensive notes which they have constantly revised with the object of developing a thorough text on physics for radiologists. This book is the result of their teaching experience and is divided into two parts. (1) The theory and practice of electrical engineering as applied to radio logical apparatus. (2) The theory and application of radiation physics with reference to X-ray diagnosis and X and gamma ray therapy.

This book will serve as an adequate preparation for the study of the more advanced treatises on physics of radiation and the design, construction and operation of X-ray and cognate apparatus. A condensed part of the material on diagnostic apparatus and technic is the result of the authors' investigation carried on over a period of fifteen years.

It is a very valuable book for teachers and students interested in radiology.

THE KENNY CONCEPT OF INFANTILE PARALYSIS AND ITS TREATMENT: By John F. Pohl, M. D., Clinical Assistant Professor of Orthopedic Surgery, University of Minnesota, Attending Orthopedic Surgeon, Minneapolis General Hospital in collaboration with Sister Elizabeth Kenny, Honorary Director the Elizabeth Kenny Clinics of Australia, with a foreword by Frank R. Ober, M. D., President American Orthopedic Association. Bruce Publishing Company, St. Paul, Minn.

This volume on Infantile Paralysis is an up-to-date and practical discussion of the technique now being advocated by Sister Kenny. It contains the plan for the relief of pain and muscle spasm by early and continued use of hot packs and a well defined plan for re-education of the neuro muscular system.

If the Kenny technique with its continuous superb nursing is followed, the physician will find that the affected parts become soft and relaxed and the pain subsides.

The physical therapist will find that the close application of the technique described in the book will gain the maximum amount of recovery more quickly and much more satisfactorily than by the techniques previously employed.

INTERNAL MEDICINE IN MEDICAL PRACTICE: By Robert Pratt McCombs, Lieutenant, Medical Corps, U.S.N.R., Recently Instructor in Internal Medicine for the Statewide Postgraduate Program of the Tennessee State Medical Association. 694 pages, 6" x 9", with 161 illustrations on 114 figures. W. B. Saunders Company, Publishers, Philadelphia.

This book is devoted solely to the practice of medicine in general practice. It is in reality postgraduate teaching, being based on the actual experience of the author in conducting statewide postgraduate courses in Internal Medicine. In this capacity Dr. McCombs has had an opportunity to get first hand knowledge of the questions most frequently asked by the general practitioners. This book will be of great value to doctors in the armed force. Many of the recent advances in the basic sciences, (physiology, chemistry, bacteriology and pharmacology) are clearly and practically discussed. This book should be on every doctor's desk.



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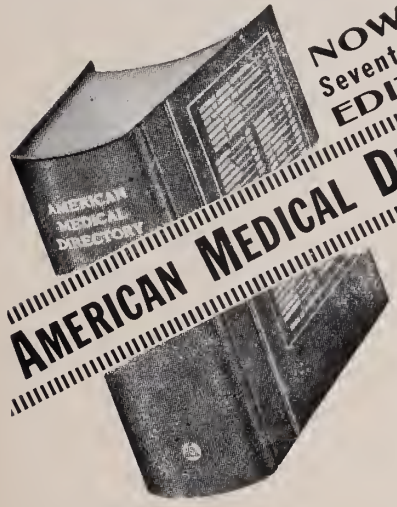
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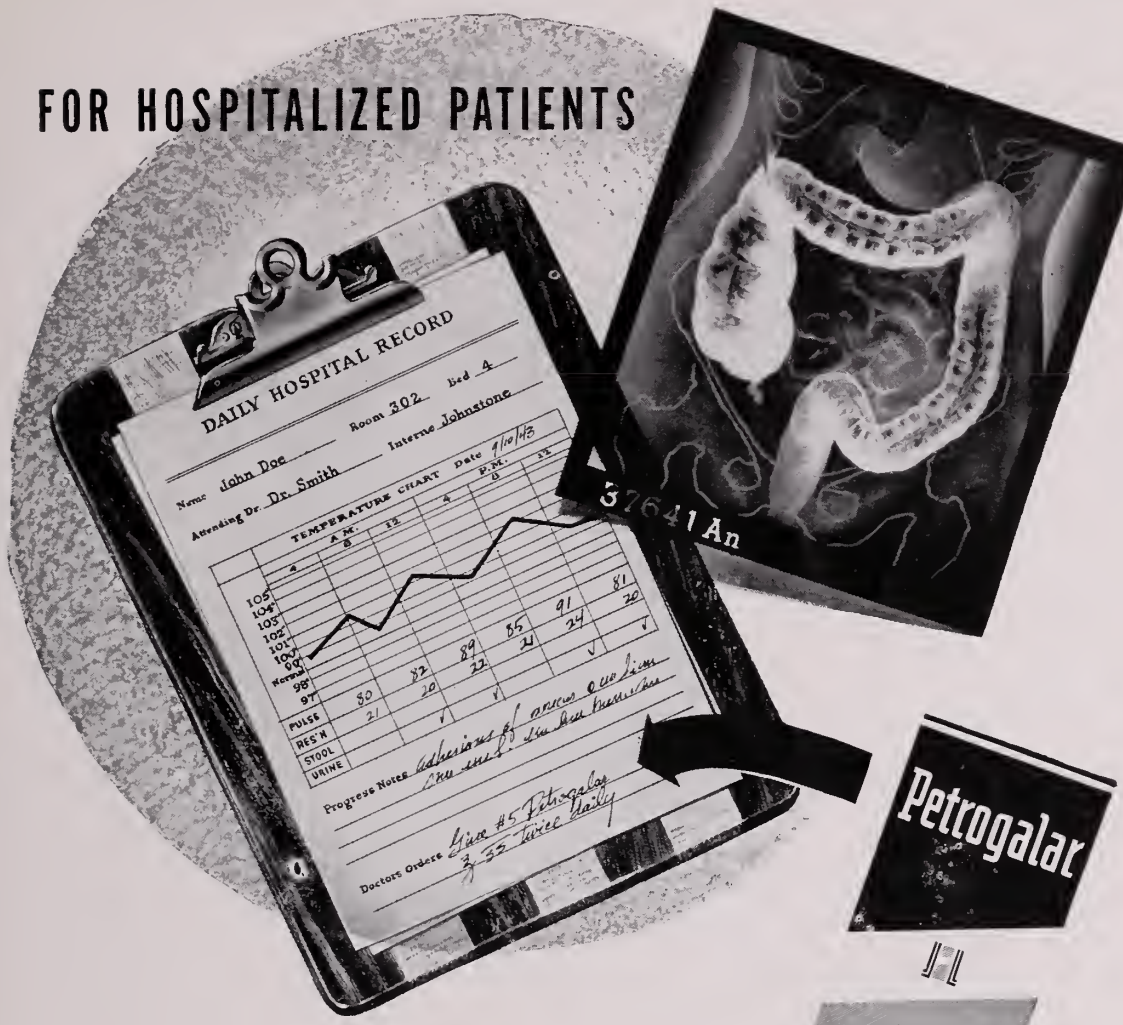
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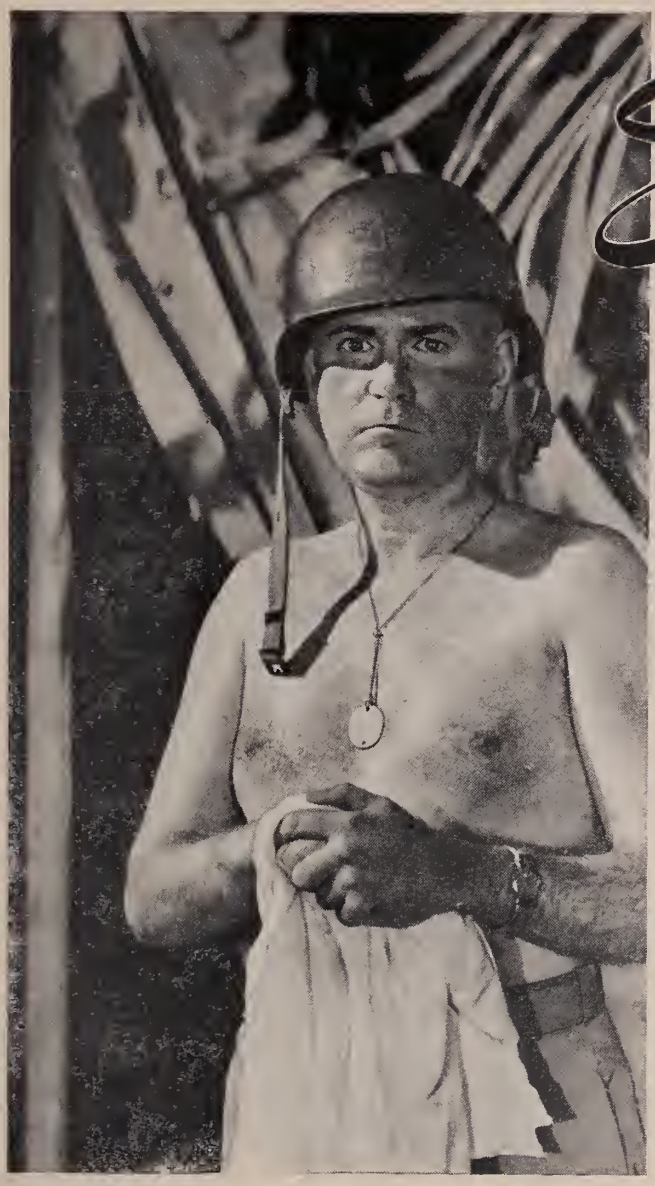
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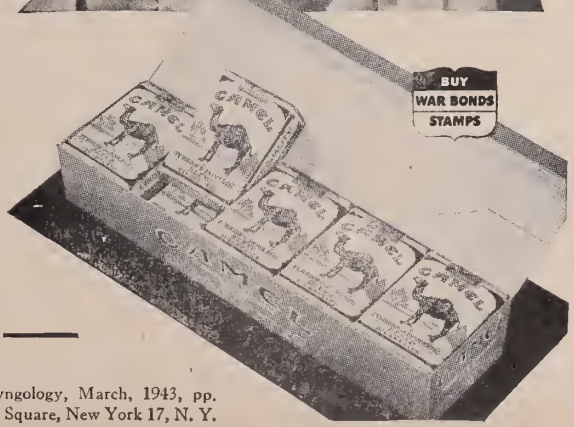
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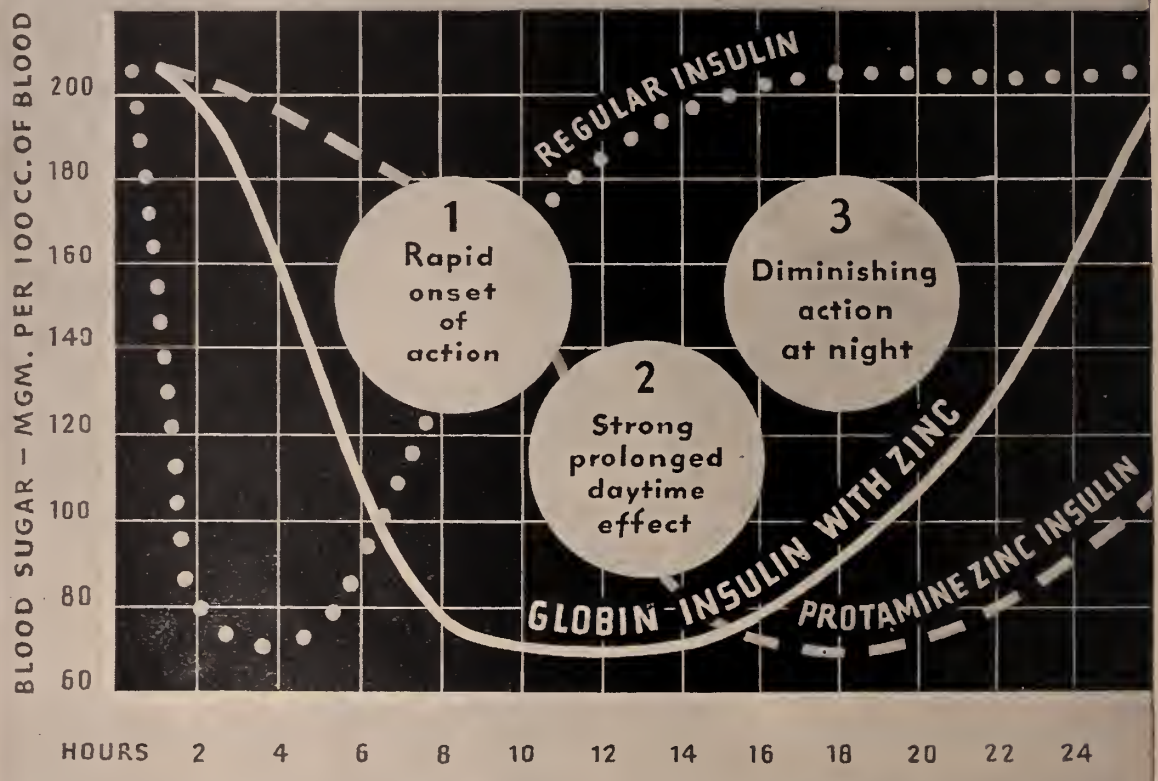
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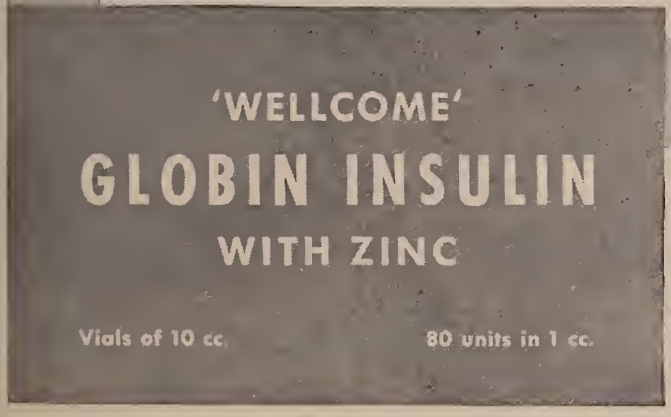
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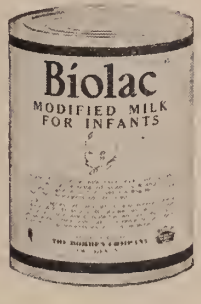
Tests of the new concentrate show *identical food* values in the smaller container. **The new container still makes one full quart of standard formula.**

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(Vaccine Virus)

TETANUS TOXOID
Alum Precipitated

TYPHOID VACCINE
Plain or Combined

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CALENDAR OF COUNTY SOCIETY MEETINGS

COUNTY	SECRETARY	RESIDENCE	DATE
Adair	W. Todd Jefferies	Columbia	February 2
Allen	A. O. Miller	Scottsville	February 23
Anderson	J. B. Lyen	Lawrenceburg	February 7
Ballard	F. H. Russell	Wickliffe	
Barren	C. R. Markwood	Glasgow	February 16
Bath	H. S. Gilmore	Owingsville	February 14
Bell	Edward S. Wilson	Pineville	February 11
Boone	R. E. Ryle	Walton	February 16
Bourbon	George M. Jewell	Paris	February 17
Boyd	Price Sewell, Jr.	Ashland	February 1
Boyle	P. C. Sanders	Danville	February 15
Bracken-Pendleton	W. A. McKenney	Falmouth	February 24
Breathitt	M. E. Hoge	Jackson	February 15
Breckinridge	J. E. Kincheloe	Hardinsburg	
Bullitt	George B. Hill	Mt. Washington	
Butler	D. G. Miller, Jr.	Morgantown	February 2
Caldwell	W. L. Cash	Princeton	February 1
Calloway	J. A. Outland	Murray	February 3
Campbell-Kenton	Robert L. Biltz	Newport	February 3
Carlisle	E. E. Smith	Bardwell	February 1
Carroll	H. Carl Boylen	Carrollton	
Carter	Don E. Wilder	Grayson	February 8
Casey	Wm. J. Sweeney	Liberty	February 24
Christian	H. B. Stone	Hopkinsville	February 15
Clark	W. Carl Grant	Winchester	February 18
Clay	L. H. Wagers	Manchester	February 8
Clinton	S. F. Stephenson	Albany	February 19
Crittenden	C. G. Moreland	Marion	February 14
Cumberland	W. F. Owsley	Burkesville	February 2
Daviess	Frank J. Condon	Owensboro	February 8 & 22
Estill	Virginia Wallace	Irvine	February 9
Fayette	Charles D. Cawood	Lexington	February 8
Fleming	Roy Orsburn	Flemingsburg	February 9
Floyd	Robert Sirkle	Weeksbury	February 23
Franklin	E. K. Martin	Frankfort	February 3
Fulton	John G. Samuels	Hickman	February 9
Gallatin	J. M. Stallard	Sparta	February 17
Garrard	J. E. Edwards	Lancaster	February 17
Grant	Wallace Byrd	Williamstown	February 16
Graves	H. H. Hunt	Mayfield	February 1
Grayson	E. B. Deweese	Caneyville	
Green	S. J. Simmons	Greensburg	February 7
Greenup	Virgil Skaggs	Russell	February 11
Hancock	F. M. Griffin	Hawesville	February 7
Hardin	D. E. McClure	Elizabethtown	February 11
Harlan	W. R. Parks	Harlan	February 19
Harrison	W. B. Moore	Cynthiana	February 7
Hart	Vinson Corrao	Munfordville	February 1
Henderson	Walter L. O'Nan	Henderson	February 14 & 28
Henry	Owen Carroll	New Castle	February 10
Hickman	H. E. Titsworth	Clinton	February 3
Hopkins	Wm. H. Garnier	Madisonville	February 10
Jefferson	Herman Mahaffey	Louisville	February 7 & 21
Jessamine	J. A. VanArsdall	Nicholasville	February 24
Johnson	Paul B. Hall, Act. Sec.	Paintsville	February 28
Knox	T. R. Davies	Barbourville	February 17
Laurel	Oscar D. Brock	London	February 9
Lawrence	L. S. Hayes	Louisa	February 21
Lee	A. B. Hoskins	Beattyville	February 12
Letcher	Bert C. Bach	Whitesburg	February 29
Lewis	Elwood Esham	Vanceburg	February 21
Lincoln	Lewis J. Jones	Hustonville	February 18
Livingston	T. L. Radcliffe	Smithland	
Logan	E. M. Thompson	Russellville	
Lyon	H. H. Woodson	Eddyville	February 8
McCracken	Leon Higdon	Paducah	February 23
McCreary	R. M. Smith	Stearns	February 7
McLean	F. L. Johnson	Livermore	February 10
Madison	Scott McGuire, Jr.	Berea	February 17
Magoffin	Lloyd M. Hall	Salyersville	
Marion	Nelson D. Widmer	Lebanon	February 22
Marshall	S. L. Henson	Benton	February 16

COUNTY	SECRETARY	RESIDENCE	DATE
Mason	C. W. Christiue	Maysville	February 9
Meade			
Meuifee	E. T. Riley	Frenchburg	
Mercer	J. Tom Price	Harrodsburg	February 8
Metcalfe	E. S. Duuham	Edmonton	
Monroe	Geo. E. Bushong	Tompkinsville	
Montgomery	D. H. Bush	Mt. Sterling	February 8
Muhlenberg	Claude Wilson	Greenville	February 8
Nelson	Keith Crume	Bardstown	
Nicholas	T. P. Scott	Carlisle	February 21
Ohio	Oscar Allen	McHeury	February 2
Owen	K. S. McBee	Owenton	February 3
Owsley	W. H. Gibson	Booneville	February 7
Perry	J. P. Boggs	Hazard	February 14
Pike	S. B. Casebolt	Pikeville	February 3
Powell	I. W. Johnson	Stanton	February 7
Pulaski	Robert G. Richardson	Somerset	February 10
Robertson	Logan T. Lanham	Mt. Olivet	
Rockcastle	Robert G. Webb	Livingston	February 4
Rowan	I. M. Garred	Morehead	February 14
Russell	J. R. Popplewell	Jamestown	February 14
Scott	H. V. Johnson	Georgetown	February 3
Shelby	C. C. Risk	Shelbyville	February 17
Simpson	N. C. Witt	Franklin	February 8
Spencer	M. H. Skaggs	Taylorsville	
Taylor	L. S. Hall	Campbellsville	February 10
Todd	B. E. Boone, Jr.	Elkton	February 2
Trigg	Elias Futrell	Cadiz	
Union	E. Bruce Underwood	Morganfield	February 1
Warren-Edmonson	John H. Blackburn	Bowling Green	February 9
Washington	J. H. Hopper	Willisburg	February 16
Wayne	Frank L. Duncan	Monticello	
Webster	C. M. Smith	Dixon	February 25
Whitley	C. A. Moss	Williamsburg	
Wolfe	John L. Cox	Campton	February 7
Woodford	George H. Gregory	Versailles	February 3

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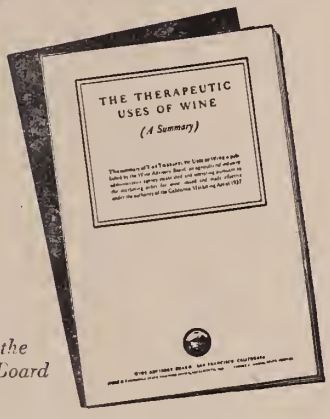
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FACTS DOCTORS SHOULD HAVE ON

WINE
IN THE DIET



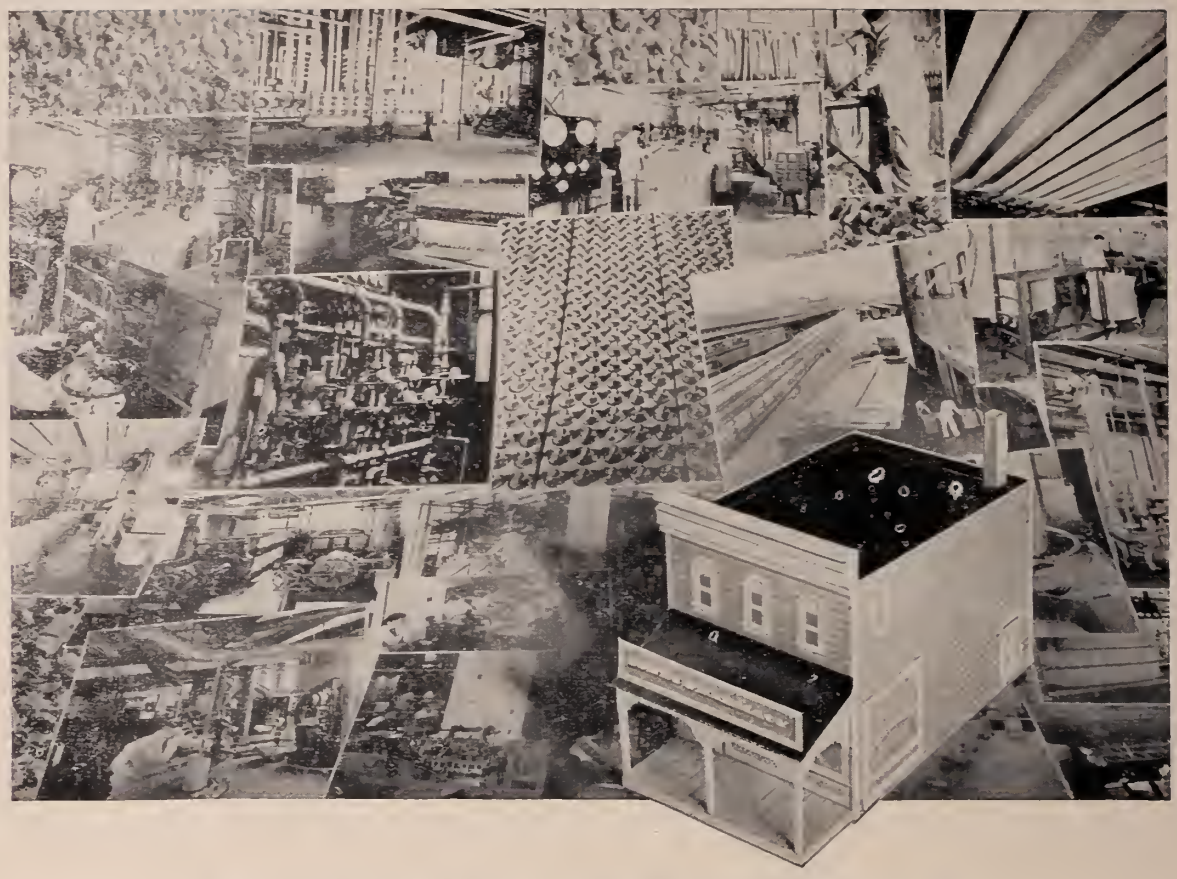
Published by the Wine Advisory Board

DISCUSSIONS of wine's historical uses . . . the caloric content of wine . . . its dextrose and levulose content . . . its vitamin and mineral constituents . . . the assimilability of the ferrous iron in wine . . . etc. . . . form one of the chapters of *The Therapeutic Uses of Wine (a Summary)*. This review in monograph form has been prepared by competent medical authorities. It should be of interest to specialists in many fields as well as to the general practitioner.

THE CONTENTS INCLUDE: Sections on the actions of wine on the gastro-intestinal system, the cardio-vascular system, the kidneys and urinary passages, the nervous system and the muscles, and the respiratory system. The uses of wine in diabetes mellitus, in acute infectious diseases and in treatment of the aged and the convalescent. The value of wine as a vehicle for medication. The contraindications to the use of wine. And an extensive bibliography for those who may wish to pursue the subject further.

This review results from a study supported by the Wine Advisory Board, an agricultural industry administrative agency established under the California Marketing Act, and has been sponsored by the Society of Medical Friends of Wine.

A copy of *The Therapeutic Uses of Wine* is available on request to any member of the medical profession. Write for it, to the Wine Advisory Board, 85 Second Street, San Francisco 5, California.



WILLIAM JONES, PH.G.

When the doors of the Jones Pharmacy opened for business many years ago, young Mr. Jones, then just out of pharmacy school, had some definite ideas about the manner in which a prescription department should be conducted. He knew all about fresh crude drugs, and he could triturate, macerate, and percolate with the best of them. He provided sparkling glassware, and his finished prescriptions were things of beauty. He operated very successfully and the doctors liked to have him do their compounding.

Things have changed since that day when Mr. Jones opened his store. For example, along about 1923 quite a commotion was raised over something called Insulin, discovered by a couple of fellows up north. Mr. Jones immediately established an Insulin department. He was quick to realize, however, that the tons of equipment required for grinding pancreas glands and processing them through a complicated series of extractions, concentrations, and purifications had no place in his store. Mr. Jones's Insulin is manufactured in Indianapolis, miles and miles away.

The production and standardization of Iletin (Insulin, Lilly) in its various strengths and modifications is but one of the many contributions Eli Lilly and Company has made toward the improvement of Pharmacist Jones's service to the medical profession.



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KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

Published Under the Auspices of the Council

VOL. 42, NO. 2 BOWLING GREEN, KY. FEBRUARY, 1944

DEATH OF OUR PRESIDENT V. A. STILLEY

Just as we go to press, we learned of the death of our distinguished President, Dr. V. A. Stilley, Benton. The next issue of the JOURNAL will contain the memorial editorial.

RELOCATION OF PHYSICIANS

Since the Editorial under the above caption appeared in the January issue of the JOURNAL, the United States Public Health Service has released a bulletin calling attention to the fact that an appropriation was made by Congress in the amount of $200,000 "for the relocation of private practicing physicians and dentists." This amount is to cover the period of the rest of this fiscal year ending June 30.

Under the provisions of the Act, a municipality, county, or other local subdivision of government may submit to the Surgeon General an application for the relocation of a private practicing physician or dentist in the applicant subdivision, provided the application has first been duly approved by the State Health Department having jurisdiction. After the need is established and approved, the Surgeon General may enter into an agreement with a private physician or dentist under which, in consideration of relocation, an allowance is provided not to exceed $250 per month for three months, and the actual cost of travel and transportation of the physician or dentist and his family and household effects to the new location, the applicant subdivision to contribute 25 per centum to the total cost of such relocation allowance, travel, and transportation costs. The relocated physician or dentist is required to engage in the practice of his profession in the applicant subdivision for a period of not less than one year and be licensed to practice in the State having jurisdiction.

It is anticipated that the greatest difficulty will be in finding physicians available or willing to enter upon an agreement for relocation.

AMERICAN COLLEGE OF SURGEONS WAR SESSIONS

The American College of Surgeons is sponsoring 22 War Sessions, to be held at various centers in the United States during the months of March and April. The primary topic will be, "Advancements in Military Medicine and Developments in Civilian Medical Research and Practice under the spur of the War Emergency."

On the program will be authoritative representatives of governmental agencies and civilian physicians and surgeons. The meetings will be open to the profession at large, including medical officers of the Army and Navy, residents, interns, medical students and executive personnel in hospitals. Special hospital conferences will be arranged for and will meet simultaneously with the scientific sessions.

Morning programs, beginning at 8:30, will present official showing of U. S. Army and U. S. Navy films on medical and surgical subjects, such as evacuation of the wounded, fractures, bomb blast, burns, and treatment of wounds. Succeeding programs will include reports on measures for the control of endemic and epidemic diseases by representatives of the United States Public Health Service. The afternoon program, beginning at 2:15, will include scientific presentations by medical members of the Armed Forces and by physicians and surgeons in civilian practice. There will be other wartime phases of medicine of corresponding importance.

The meeting for the area comprising the Fifth Service Command will be held in The Netherland Plaza Hotel, Cincinnati, Ohio, on Wednesday, March 8th, and it is hoped that there will be a representative attendance from the membership of the Kentucky State Medical Association.

A. M. A. RADIO PROGRAM

On January 8 the American Medical Association launched a new radio broadcast under the title, "Doctors at War." This series will continue to July 1, 1944 and will be heard over NBC Stations and the independent radio stations affiliated with the NBC network, each Saturday afternoon at 3:30 Central War Time. This radio program will be carried out with the official collaboration of the Medical Department of the United States Army and the Bureau of Medicine and Research in the United States Navy.

Doctors everywhere are urged to take notice of this announcement and to stimulate the organization of individual and group audiences, since this will bring to the public intimate facts in regard to contributions made by members of the profession in service with the Armed Forces. All will agree that it is a good time to let the public know that Medicine is prepared for any and all emergencies.

CURRENT COMMENTS

The annual session of the American Medical Association in 1944, which had been scheduled to be held in St. Louis, has been changed by the Board of Trustees of the Association so that it will now be held in Chicago June 12 to 16. The change was necessary because of information received that it would not be possible for St. Louis to provide adequate hotel accommodations.

The meeting of the House of Delegates of the Association will be held at the Palmer House and the Scientific Exhibit will be installed in that hotel. The Technical Exhibit will be housed at the Stevens Hotel.

If you plan to attend this meeting it is well to make your hotel reservations now, as reservations are extremely difficult to secure.

The Scientific Exhibits will cover all phases of medicine and the medical sciences with particular emphasis on graduate medical instruction for the physician in general practice.

Major James Carre Magee, Medical Corps, U. S. Army, retired, and who, just prior to retirement, was the Surgeon General of the Army, has been named Executive Officer of the National Service of the Division of Medical Sciences of the National Research Council and assumed duties in this capacity December 1, 1943. He will devote his full time to the organization and will be responsible for collecting "Medical reports and records, widely dealing with military medical practice, civilian practice as affected by the war, medical education and research, and the distribution of diseases, all of which will be made available by publications, summaries and notes at a later date."

The American Hospital Association has just released an announcement calling attention to the fact that the Board of Trustees of the Kellogg Foundation has voted a grant of $35,000 for study by the Postwar Planning Committee of the American Hospital Association of post war hospitalization needs of America.

The Commonwealth Fund has also provided a grant of $35,000, contingent upon the securing of a balance necessary for a $100,000 two year budget from other sources. The Board of Trustees of the American Hospital Association has appropriated $15,000, which brings the total up to $85,000.

The purpose of this study is "to determine the adequacy of distribution of present hospital facilities and the best method of insuring adequate hospital care for all citizens." A hospital study commission will be formed at an early date.

The Editor has just received a report from the Associate Director, M. T. MacEachern, M. D., of the American College of Surgeons, listing the following physicians who were accepted into fellowship in the American College of Surgeons during the year 1943:

Woolfolk Barrow, Lexington, Winston N. Bloch, Louisville, Max Bornstein, Louisville, Evan L. Garrett, Murray, Charles H. Maguire, Louisville, Herman Mahaffey, Louisville, Edward B. Mersch, Covington, Edward K. Munn, Jenkins, Charles M. Schroeder, Louisville, E. Dargan Smith, Owensboro, Ernest C. Strode, Winchester.

The next written examination and case history review (Part I) of the American Board of Obstetrics and Gynecology will be held in various cities Saturday, February 12, 1944 at 2:00 P. M. Those in the military service can take their examination at their places of duty.

Part II examination will be held later on in this year. For further information and application blanks write to Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh, 6, Pa.

ORIGINAL ARTICLES

MEDICAL AND SURGICAL DISEASES OF THE PROSTATE GLAND

HERMAN L. KRETSCHMER, M. D.
President Elect of the American Medical Association
Chicago, Illinois

May I present for your consideration three common lesions of the prostate gland, namely Chronic Prostatitis, Carcinoma, and Benign Prostatic Obstruction. These are the most frequent lesions for which the patient consults his physician.

CHRONIC PROSTATITIS: Chronic infection of the prostate gland occurs more frequently than is generally believed and our failure to bear this in mind often results in overlooking the prostate gland as a focus of infection in certain metastatic conditions, such as arthritis, iritis, and neuritis, and as the causative factor in certain cases of urinary and sexual symptoms.

I am sure that you have all had the experience of having patients come to you who have had repeated examinations made elsewhere to locate a focus of infection and yet in whom no examination of the prostate was made. Often no examination of the prostate is made due to the fact that chronic infection in the prostate frequently does not produce any local symptoms, as a result of which neither the patient's nor the physician's attention is directed to the prostate.

I should like to disabuse your minds of the fact that chronic prostatitis is the result of previous venereal diseases. Unfortunately, many physicians, as well as many patients, believe that once the diagnosis of chronic prostatitis is made, it carries with it the assumption of a previous gonorrheal urethritis. Such is not the case. While it is a well known fact that infections of the prostate during the course of gonorrheal urethritis do occur in a certain percentage of cases, it does not necessarily follow that all cases of chronic prostatitis are of gonorrheal origin. In my experience, only 60 per cent of the patients whom I have had under my care gave a history of previous attacks of gonorrheal urethritis. On the other hand, in many of my patients it was easy to elicit a history of one or more attacks of influenza, the common cold, tonsillitis, and infected teeth. In some cases the prostatitis is the result of urethral instrumentation.

Read before the Kentucky Medical Association, Louisville, October 4, 5, 6, 1943.

and in an occasional case in which the patient has had an abscess of the prostate, chronic prostatitis remains as an aftermath of the abscess.

It is to be remembered that chronic infection in the prostate is very protein in its manifestations. For example, frequently the only complaint the patient may present is the presence of urethral discharge. The largest number of patients present urinary symptoms which may vary in intensity and degree, such as frequency, burning, nocturia, and hesitation. In some patients the only complaint is the presence of pus in the urine which has been found on routine urinary examination.

The next largest group present sexual symptoms, such as premature ejaculation, complete loss of erection, incomplete erection, and lack of sexual desire. Unfortunately, many of these patients are looked upon as neurasthenic and go from one doctor's office to another's without obtaining the proper diagnosis and treatment due to the fact that the doctors fail to realize the relation between the symptoms and chronic prostatitis. In many cases of sexual incompatibility the cause of the incompatibility is chronic prostatitis. Many cases of incompatibility end up in the divorce court whereas if the underlying cause or factor is found and treated, we, as physicians, can prevent many families from going on the rocks.

Metastatic symptoms are frequently due to chronic prostatitis. In a large number of these patients the prostate as a causative factor is overlooked. Unfortunately, I see patients who have had their teeth and tonsils removed and have had other forms of treatment without relief due to the fact that no attempt at examination of the prostate was made. It is my impression that one of the most common causes of backache in middle-aged men is chronic prostatitis. There is not always a direct connection between metastatic symptoms and an infected prostate but in many instances the prostate acts as an intermediary factor between a focus of infection and the metastatic symptoms. For instance, a patient with infected teeth may develop chronic prostatitis, which in turn causes arthritis of the knee; with treatment of the prostatitis, the arthritis will clear up, but until the primary focus of infection has been treated, namely the infected teeth, the patient will not be cured as the infected teeth may again lead to

infection of the prostate and metastatic symptoms.

Finally, I would like to call attention to another small group of patients in whom there are no symptoms directing attention to the prostate and in whom the urinary findings are negative. There may be systemic symptoms, such as repeated severe attacks of chills, fever, and sweats. To this group of cases the term "Silent Prostate" is applicable.

The diagnosis of chronic prostatitis is made by the rectal examination and a microscopic examination of the strippings. The rectal examination shows changes in the size and consistency of the prostate. The prostate is often enlarged and tender, as well as harder in consistency than normal. In a few instances, the only change that one can detect on rectal examination is a change in the consistency, which is definitely increased. The normal prostatic fluid contains no pus. In cases of chronic prostatitis the microscopic field may show a few pus cells or the entire field may be covered with pus cells. It may be well to direct your attention to the fact that in some of these patients the first examination of the strippings may show no pus or at most a few leucocytes, sometimes in clumps. Patients of this type should be reexamined at weekly intervals and not infrequently the second or third examination of the prostatic fluid shows nothing but pus. The point I wish to make is that, in a patient in whom one is searching for a focus of infection, one negative report is of little value and I always have this type of patient report at weekly intervals. It is very simple to fix the prostatic fluid on the slide and to stain it for the presence or absence of bacteria.

The treatment is relatively simple and the most important single agent in the treatment is heat. The heat may be applied to the prostate with a prostatic heater inserted into the rectum or the patient may be advised to use hot sitz baths and to apply a hot water bag to the perineum. Second in importance is massage of the prostate and here the massage should be carried out until the strippings are free of pus. It is to be remembered that prostatic massage should never produce pain. In the beginning the patient may be treated twice a week and then once a week and gradually reduce the treatments as the amount of pus in the microscopic field becomes less and less. In my experience, vaccines, serums, hormones, and sulphanilamides have little, if any, value.

Cancer of the Prostate: There seems to be a prevailing notion among the medical profession, as well as the laity, that once a diagnosis of cancer of the prostate has been made all is necessary to effect a cure is to perform an orchectomy. It is extremely unfortunate that this opinion has become so widespread since this form of treatment is of very recent origin and I do not believe enough time has elapsed since the procedure was instituted to talk about cures. These conclusions are hasty, especially if we bear in mind that most analyses of the results obtained in the surgical treatment of cancer are based on the results obtained five and ten years after operation. It seems to me that the time is ripe for those who have had experience with this form of treatment to report their results, as was recently done by Randall.

My results have not been as satisfactory as one would be inclined to believe they would be from the literature. I have recently gone over the records of eleven patients upon whom I performed orchectomy. Three of my patients are dead, five, eight, and eleven months respectively after orchectomy. Three patients have severe pain, one of whom requires frequent doses of morphine. One patient has an increase in both the number and extent of his bone metastases. One patient states that he has improved eleven and one-half months after orchectomy, one seven months after, and one four months after orchectomy. One of the patients states that four months after his orchectomy there is no change in his status. Interesting is the fact that some of these patients state that they have a feeling of well being immediately after the orchectomy. In the two or three patients who died this feeling of well being was short lived.

It has occured to me that the time is ripe to make an evaluation of this form of treatment based on the statistical studies in patients over a five to ten year period before one talks about cures with this procedure.

Benign Prostatic Hypertrophy: Benign prostatic obstruction may be due to enlargement of the lateral lobe, of the middle lobe, of a combination of the lateral lobe and the middle lobe, bars, or contractures.

The results of obstruction are always the same, irrespective of the type of patho-

logy present, namely, thickening and hypertrophy of the bladder wall which may lead to the formation of diverticula and stones; dilatation of the ureter and kidney pelvis, which are present early and are more frequently present than we surmise. Due to the presence of stagnation of urine, infection supervenes sooner or later. If the obstruction is not relieved, hydronephrosis develops which may go on to complete hydronephrotic atrophy with uremia and death of the patient.

The diagnosis, as a rule, is perfectly simple and easy and is based upon a very careful history and the evaluation of the symptoms and the rectal examination. Frequency of urination heads the list of symptoms and is always more marked at night than during the day. It is always progressive so that at first the patient is obliged to rise once or twice at night and eventually he will be obliged to rise eight or ten times at night. This stands in marked contrast to the patient with a stone in his bladder who when he rests in bed at night is quite comfortable and when he is up and about has great frequency of urination. The rectal examination shows the presence of changes in the prostate. The prostate is increased in size; it may be once or twice the normal size to that of an orange. It is smoother in contour, the borders are well defined, and it is soft and elastic in consistency. In cases of cancer of the prostate, the prostate is hard, irregular, often nodular, and often shows the extension of the carcinoma into the seminal vesicals and extension beyond the capsule. One should always take note of the sphincter tone since in certain cases of diseases of the central nervous system, such as tabes, which may be confused with prostatic hypertrophy, there is relaxation of the rectal sphincter which may be of great value.

Next in order is the determination of residual urine. It is to be remembered that the passage of a catheter in some of the patients may be followed by dire consequences, hence great care must be given to the technique and there should be no break in antisepsis and asepsis. If the patient has a suprapubic tumor, all the urine should not be withdrawn at once. It is far better and far safer to withdraw only a part of the urine since at this time the catheterization is only for the purpose of demonstrating the presence of residual urine.

The local examination must be supplemented by a complete general physical examination, including a study of the renal function.

At this point, I should like to emphasize and stress the importance of pre-operative care in the prostatic patient. Infection, when present, must be cleared up as much as possible with an indwelling catheter and if this fails to accomplish results, a suprapubic cystostomy may be necessary. Patients with impaired renal function need to have this function improved and stabilized. Patients with other complicating diseases, such as diabetes, and diseases of the cardio-vascular system, should be referred to specialists for treatment.

Once the diagnosis of obstruction is made, the treatment is perfectly obvious, namely the obstruction must be removed by perineal prostatectomy, suprapubic prostatectomy, or transurethral resection.

There still exists among some of the urologists of this country, differences of opinion regarding these three surgical procedures. A great deal of discussion has taken place regarding the merits of these three various forms of treatment. Sight has been lost of the object of the treatment, which in essence is to remove completely the obstruction. As far as I am concerned I think it does not make much difference which of the methods one uses providing one removes completely the obstruction. On the other hand, I believe one should give preference to the method which carries with it the lowest mortality rate, the shortest duration of stay in the hospital, and the smallest number of post-operative complications. In my opinion, these three objectives have been met by transurethral resection.

My personal preference has been for transurethral resection and in the last three years I have performed only five suprapubic prostatectomies and no perineal prostatectomies. The only reason that suprapubic prostatectomy was performed in these cases was that it was impossible to introduce the resectoscope because of the size of the obstruction, hence resection could not be carried out. It is my opinion that, by transurethral resection, the obstruction can be removed completely. The post-operative stay in the hospital is shorter than when open operation and the patient has fewer post-operative complications and the mortality is lower. A recent survey of my cases, unselected, has re-

vealed one death among 232 consecutive cases.

Besides the fact that the mortality is lower, the stay in the hospital shorter, and complications are fever, transurethral resection has other advantages in that it has allowed some patients, who have been denied surgery because they were so-called "bad risk" cases, to be operated and cured of their complaints. Many patients with serious cardiac lesions, such as angina, coronary thrombosis, and chronic myocarditis, patients with hypertension, metastatic carcinoma, haemoplegia, patients in whom one would hesitate to do prostatectomy, have been relieved of their prostatic obstruction when heretofore they have been denied relief of their suffering.

It is a well known clinical fact that mortality with any procedure increases with each decade of life and that the mortality of men over 90 is much more than with men of 60. This fact has made it possible for the men in those upper age groups to be relieved of their obstruction and not be denied medical help because of their age.

Summary

1. Chronic Prostatitis is a relatively common condition, easy to diagnose and simple to treat. The results are most gratifying.

2. Orchectomy for Carcinoma of the Prostate has not been very satisfactory in the treatment of Carcinoma of the Prostate. One is not justified in holding out false hopes to this group of patients.

3. In the treatment of Benign Prostatic Obstruction transurethral prostatectomy, in my opinion, is the method of choice. Hormones are without any value whatsoever.

Burn Shock—Much larger doses of blood serum or plasma than are usually prescribed are needed to save the lives of patients with burn shock, according to a report in the current issue of The Journal of the American Medical Association by a group of physicians at the Michael Reese Hospital, Chicago. At least 100 to 110 cubic centimeters (about four ounces) for every 1 per cent of body surface burned should be given during the first seventy-two hours, they advise. Such treatment, they believe, would prevent depletion of the body's proteins and "might protect vital organs like the liver and kidneys."

CHEMOTHERAPY IN DIGESTIVE DISORDERS

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Many forms of chemotherapy have been used through the ages in the treatment of digestive disease. Only a few of these agents have served as sole measures of therapy. Almost always they were only adjuncts to a well-ordered program of treatment. A few outstanding exceptions to this observation can be found, probably the most striking being infection by Endamoeba histolytica. Without any additional supportive treatment amebiasis can be controlled or perhaps cured in most instances by the properly timed administration of suitable combinations of preparations of ipecac, arsenic and iodine.

The drugs generally used in the treatment of digestive disorders can be divided into four general classes. There are first those drugs which are given as curative agents. Among these are arsenic, iodine, ipecac, mercury, mercurochrome, gentian violet, calcium salicylate, thymol, aspidium, atabrine, quinine and hydrochloric acid. These and many others have been proclaimed as drugs possessing specific curative properties for a variety of intestinal disorders. Some of them offered real help. Only rarely could any of them be given credit for the actual cure of disease.

In a second group of substances frankly designed only as symptomatic aids are the various powders such as bismuth, kaolin, tribasic calcium phosphate and aluminum hydroxide. The various gums, among them karaya gum, agar-agar, flaxseed, and psyllium seed as well as the processed products made from these substances, have similar properties. These have helped to absorb water and in this way thicken the stools as well as allay abdominal distress.

Opiates undoubtedly have great value in the control of gastro-intestinal discomfort, and so also have hypnotics, particularly when the latter are given with antispasmodics.

Finally, a large group of medicated solutions have been used as intestinal irrigations and as medicaments by mouth intended to sterilize the gastro-intestinal tract. Among the former are acriflavine,

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silver nitrate, gentian violet, mercurochrome and a physiologic solution of sodium chloride. All these measures clearly indicate a constant groping for some specific medication for the cure of the great multitude of intestinal disorders. Most of them have fallen short of our expectations.

As a result of these experiences, the advent of the sulfonamide compounds was viewed with mixed feelings of hope and skepticism. The first sulfonamide compound was made as far back as 1908. A student at the Vienna Institute of Technology by the name of Gelmo obtained from coal tar a dye known as para-aminobenzene-sulfonamide. Not until twenty five years later, when Dr. Gerhard Domagk saved his daughter from generalized septicemia with it, did the drug really come into general use. The advances in therapy that this early discovery initiated are now a matter of history. Many derivatives of the original substance are discovered day by day. Each in turn is found useful and yet many are not useful enough. To understand the "why and wherefore" of the various drugs of this series used in gastro-intestinal disorders, it is necessary to recount again the nature of the various forms of infection of the digestive system. The digestive system includes the tube from the incisor teeth to the anus together with the liver and the pancreas.

The sulfonamide compounds have had some use in treatment of diseases of the mouth. There are forms of stomatitis which have responded to local application of, as well as by systemic reaction to, sulfathiazole and neoprontosil. Severe gingivitis also has been affected favorably by the local application of these drugs.

Little has been recorded of the use of sulfonamide compounds in treatment of diseases of the esophagus, stomach or duodenum.

Infections of the liver and bile ducts have been influenced favorably by several of the drugs of the sulfonamide series.

Morrison and his associates have shown that during the infectious phase of cholecystitis, when streptococci are present in the bile, not only will prompt relief of symptoms of disease of the biliary tract occur after the administration of sulfanilamide but the bile will become sterile. They gave 4 gm. of sulfanilamide for three days, then 3 gm. for three days, then 2 gm. and then 1 gm., the course of treatment lasting ten days. The concentration of the drug in the bile parallels closely that in the blood stream. They stress the suggestion, however, that most cholecystic disease is metabolic in origin and only in the infectious stage will such treatment be effective.

Many infections of the intestines have been influenced favorably by one or several of these drugs. There are some intestinal infections which have their primary seat in the small intestine: that is, tuberculosis and so-called regional enteritis. There are others which are primarily infections of the large intestine: that is, the streptococcal form of ulcerative colitis, venereal lymphogranuloma involving the large intestine, amebic colitis and a regional form of colitis. Finally, there are intestinal conditions which attack small and large intestine alike, notably bacillary dysentery, deficiency states, allergic colitis and the so-called idiopathic form of ulcerative enterocolitis.

Why certain of the sulfonamide drugs are used in the various intestinal infections is best brought out by a description of each of the types of intestinal malady.

The greater therapeutic value of one sulfonamide compound over another in certain bacterial diseases has been established. Specific activities exhibited by certain sulfonamide derivatives against various bacteria are well known. The activity of the drug depends on their bacteriostatic action and on the defense mechanism of the patient. Failures or successes in the control of infections by the various ones of these drugs may parrallel the degree of concentration of these drugs in the blood and tissues in some diseases, but this is not necessarily so in others, nor is it true in all the sulfonamide drugs. The latter situation prevails, particularly, in a variety of intestinal infections. Frequently several organisms may play a role in the inception or at least the progress of the disease. Thus it may become quite difficult to choose the proper drug for maximal effect and the predominating thought may not be concerned with concentration in the blood stream but rather with local effect in the intestinal lumen. Furthermore, since large amounts of a drug will be required for the best local effect it may be necessary to choose a drug absorbed in relatively small amounts and having rather minimal toxic reactions. In table 1 are listed some of the sulfonamide drugs found useful in the intes-

tine and their effects on some commonly encountered bacteria.

It is difficult to say that the reactions are specific; they are rather favorable in their influence on the diseases with which these organisms are associated. Thus, although one may not know the bacterial cause, if such it is, of some intestinal infections, yet one may attack the infection by a flanking movement, as it were, and, by ridding the intestine of some forms of bacteria, favorably affect the course of the disease. Such is the case with so-called regional enteritis.

Regional Enteritis: Regional enteritis is a subacute to chronic, destructive, exudative and proliferative regional inflammatory process commonly and perhaps usually beginning in the distal portion of the ileum. The onset of this disease is usually insidious but by the time medical aid is sought, well pronounced features of advanced disease are frequently apparent.

As with many chronic infections of a proliferative and destructive nature, the story frequently begins with the complaint of fatigue, general malaise and loss of weight. At the time of appearance of these symptoms, or soon after their onset, a patient will complain of a mild, usually intermittent, type of diarrhea. The stools will be loose and watery, and defecation will be associated with cramps.

Periods in which normal or even hard, dry stools are passed may alternate with diarrhea. The story in these respects is similar to that of a patient who has intestinal tuberculosis. As a rule, however, in cases of regional ileitis, progression to the next phase is more rapid and symptoms are more severe than in cases of intestinal tuberculosis. In the former, attacks of abdominal pain soon supervene and the pain may be of the dyspeptic or obstructive type from the first. In either event, obstructive features will soon predominate.

Generally speaking, there are four phases of the disease. The earliest manifestation is that of an acute inflammatory process. As the terminal portion of ileum is the most frequent initial site of the disease, irritation of this portion of the intestine and its adjacent peritoneal covering produces a picture difficult to distinguish from acute appendicitis. The most common symptoms are fever of low grade, leukocytosis, nausea, vomiting, and tenderness and pain in the epigastrium or right lower abdominal quadrant. Diarrhea and cramps are unusual at this stage of the process.

As the disease advances, intermittent attacks of diarrhea are characteristic. The typical syndrome of enteritis of low grade then prevails, for the patient has fever, anemia and a palpable mass in the right lower abdominal quadrant and has lost weight; his stools are loose or watery and, if any pain is present, it is mild and colicky.

Remission of symptoms is common in the two stages described but, as the stenosing effects of the disease increase, the periods of relief are shorter and occur less frequently. The symptoms typical of intestinal obstruction are superimposed on those of chronic enteritis. The attacks of diarrhea are more profound and are accompanied by severe abdominal cramps, borborygmus, abdominal distention or visible contracture of the coils of the small intestine proximal to the diseased segment. Malnutrition and anemia become prominent features since much of the nourishment and fluids is lost because of the diarrhea. Furthermore, intake may be greatly limited on account of persistent nausea or even vomiting.

The fourth and final phase of the disease is attained when either acute obstruction is superimposed on the chronic condition or perforation of the bowel occurs and there ensues the formation of an abscess or fistula. The fistula may communicate with an adjacent portion of the intestine, with other viscera or with the abdominal parietes. The debility occasioned by the sepsis and the deprivation of nutritional elements and fluids assumes great significance and in itself may be the terminating factor.

The course of regional enteritis as delineated is uniform only in a very general way. In the individual case the first signal of impending trouble may be the onset of the syndrome of the late phases, or the symptoms may have progressed from an occasional episode of pain in the right lower abdominal quadrant or epigastrium to intestinal occlusion although there may have been little intervening disturbance. In an occasional case the chief complaint will be the one which is only remotely associated with the malady.

These facts and others to be mentioned concerning the pathologic changes of the diseased segment of bowel give further evidence of the destructive, proliferative and progressive nature of the disease.

Generally speaking, when one first sees these patients the disease is in the advanced stage and the pathologic process already has produced unmistakable gross deformity. There is evidence of an attempted fibrotic repair associated with chronic inflammation on which acute exacerbations of the disease have been superimposed. Pathologic descriptions of the condition have been comparatively uniform. The terminal portion of ileum, as has been indicated repeatedly, is the segment most frequently involved. Thickening of the wall of the bowel, narrowing of the lumen of the bowel and ulceration of the mucosa with the formation of pseudopolyps are noted. These associated characteristics have been described often as granulomatous ileitis. The character of the lesions may range from subacute to chronic. At times the intestinal wall is greatly thickened by edematous infiltration. Pseudotubercles, in association with large foreign body giant cells, are common. Perforation with the formation of an abscess is fairly common. As a result of this, multiple communicating fistulas may develop. These are the result of chronic perforation which takes place so slowly that time is allowed for segregation of the process from the peritoneal cavity and usually small walled-off abscesses form. These, in turn, discharge their contents into a neighboring viscus. Grossly, the most striking features are typical enlargement and loss of flexibility of the affected segment of bowel and shortening and great thickening of the mesentery, in which the regional lymph nodes are large and firm. The tissues have a dusky, bluish red appearance and the phlegmonous exudate is distributed over the serosal surface of the intestine.

In the instances in which the condition is of long standing, many exacerbations usually have occurred and a large phlegmonous mass may have resulted. It is often very difficult to separate such a mass from the surrounding structures. At times, too, such lesions may affect the bowel in segmental fashion with relatively normal uninvolved segments lying between the involved portions. The involved segments are readily distinguished from the normal portions by their loss of elasticity and soggy, hoselike appearance. The microscopic appearance of the lesion does not have any characteristics which distinguish it from other chronic inflammatory processes. Cells of the lymphoid series appear to predominate, except in the earlier, more acute stages. In the chronic process, the small lymphocyte, plasma cell and fibroblastic elements are in the ascendancy, eosinophils may be present. Submucous lymphoid follicles are usually very numerous. Giant cells are frequently encountered and often contain crystalline or lipoid particles. Focal collections of lymphocytes under the serosa with the giant cells here and there make the picture simulate tuberculosis.

When this condition is a well localized infection, with much damage and consequent narrowing of the intestinal wall, resection is the treatment of choice. However, a number of cases have recently been encountered in the earlier phases of the disease, or after recurrent disease following primary resection of segments of bowel. In both of these groups such sulfonamide drugs as sulfasuxidine have been found useful. Sulfasuxidine is particularly desirable because it is not absorbed from the gastro-intestinal tract in sufficient quantities to cause toxic manifestations and thus can be administered by mouth in large amounts, and because it is effective in the presence of ulcerating lesions of the bowel.

The drug should be administered in doses of at least 8 to 12 gm. daily for weeks at a time. It is not necessary to maintain the early suggestions of 0.25 gm. of the drug per kilogram of body weight. This in many instances will be wasteful of the drug. If favorable effects come they will occur at about the dosage indicated. My custom has been to start with 1 gm. every three hours during the waking hours and increase this to 2 and sometimes 3 gm., depending upon the activity of the disease, the severity of the diarrhea, the tolerance or intolerance of the drug and the clinical response to treatment. As with all intestinal infections, contrary to the usual manner of prescribing the sulfonamide drugs—that is, starting with large amounts and reducing as a desired concentration is reached—it is well to administer this drug cautiously and, if it is well tolerated, as is the rule, to increase the amount gradually. If on the other hand the patient is intolerant of the drug —and this has occurred several times in my experience—a large amount of the drug may result in extreme prostration and increased intestinal activity, whereas the smaller amount will cause a mild exacerbation of such symptoms.

In 50 per cent of a group of patients whose lesions were limited to the small intestine, symptoms subsided or markedly improved. This refers to the fact that the patients became afebrile, diarrhea subsided, the concentration of hemoglobin returned to normal and symptomatically they seemed well, although little or no change occurred in the roentgenogram.

Tuberculosis: Intestinal tuberculosis attacks primarily the small intestine, although it may extend caudad to involve the large intestine extensively. The ileocecal coil is commonly involved. The accepted treatments of rest, sunshine, food, vitamins, injection of oxygen into the peritoneal cavity and roentgen therapy are well understood. Much study and experimental work are under way to determine the effects of sulfonamide compounds on this destructive infection. It has been shown that promin arrests, although it may not completely suppress, tuberculous infection of guinea-pigs. It has so far proved less successful in the treatment of established human tuberculosis than in that of guinea-pigs.

Primary Infections of the Large Intestine: Among the infections, primarily of the large intestine, commonly encountered may be listed four: streptococcal ulcerative colitis, amebic ulcerative colitis, the type of ulcerative colitis due to the virus or venereal lymphogranuloma and segmental or regional ulcerative colitis, a condition of unknown cause.

Streptococcal Ulcerative Colitis: Streptococcal ulcerative colitis has characteristic pathologic manifestations and hence typical proctoscopic and roentgenologic features. Its lesions begin in the most distal segment of the rectum, just above the anal canal. Diffuseness of involvement of the bowel is its pathognomonic feature. Whether 1 inch (2.5 cm.) of the lower part of the rectum or 5 feet (1.5 meters) of bowel are involved, the involved segment is always affected in its entirety, its entire circumference and the deeper layers of the wall and the mucosa secondarily. This gives the granular, easily bleeding mucous membrane so characteristic of this lesion. The disease tends to spread upward until the entire colon and even the lower part of the ileum in the late stages of the disease, become involved. Since it is primarily a disease of the intestinal wall a very characteristic roentgenologic picture develops. The bowel becomes diffusely narrowed, haustral markings are erased, the flexures and curves become more angulated and the result is a smooth tube. In this, streptococcal ulcerative colitis differs from all other forms of ulcerative intestinal disease, except perhaps regional enteritis when it is confined to the distal portion of the ileum. The latter condition has, however, many features to distinguish it from this form of ulcerative colitis. Because of the relatively very high incidence of the streptococcal form of ulcerative colitis, and because of the consistency with which its clinical, proctoscopic and roentgenologic manifestations conform to a certain pattern, I am inclined to use this type of ulcerative colitis as a norm and to describe other types chiefly by noting in what respects they differ from it.

This form of ulcerative colitis manifests itself in a variety of ways but in general the clinical manifestations follow one of three general courses. When the lesions are limited to the lower segments of the large intestine, particularly the rectum and rectosigmoid, the onset of symptoms can be described as insidious. The patient may have normal motions of the bowel but in addition may pass two or three or many bloody, purulent rectal discharges. He may not have any other important systemic symptoms except that he will gradually begin to speak of not feeling well. His complaint of not feeling up to par may gradually increase as the number of rectal discharges increases and ultimately a mild form of diarrhea may develop.

The second common onset may be classified by saying that the symptoms are severe. The patient may start rather suddenly with a bloody diarrhea, low gradual fever, gradual loss of appetite and with it the loss of weight and all the concomitants of a moderately severe illness. All the symptoms may start in a fulminating manner with an onset almost like that of lobar pneumonia or other similar serious illness. There will be a high fever, massive discharges of bloody material from the rectum, great prostration and rapid depletion.

A patient's symptoms may remain in the insidious form for months or years and then at the time of an infection of the upper part of the respiratory tract, some other intercurrent illness or perhaps some severe nervous trauma, there may be a sudden exacerbation of the disease, and a change to a severe or even the ful-

minating form. The question is often raised whether these are different diseases or stages of the same disease. Experience seems to indicate that these are stages of the same disease attacking patients in various ways. Thus, one must be ever on the alert for the occurrence of this disease in these several forms so that it may be distinguished carefully from the types of colitis which are to be discussed presently.

The treatment of this disease is a study in itself. Its chief features are a well-ordered program of rest, the proper diet, serums and vaccines, blood building measures such as transfusions, for most of the patients afflicted with this condition are anemic, and many other supportive measures. Several of the sulfonamide drugs have been found especially valuable in the treatment of this disease. If one examines table 1, one can readily surmise which drugs should be most effective. It could hardly be expected that any sulfonamide drug would restore a bowel damaged by scar tissue and long-standing inflammation to normal. All that one can expect of the drug is a favorable effect on those patients whose disease is of short duration, those suffering with a more or less acute phase of the disease, those whose bowel is not too severely damaged, or those suffering from a sharp recurrence of a long standing disease. This effect has been achieved by sulfanilamide, sulfathiazole, sulfadiazine, sulfaguanidine, sulfasuxidine, and pre-eminently by neoprontosil. Patients suffering from this disease are usually in a severe stage of depletion and the toxicity of the first three drugs mentioned has been found too great for the average case. Neoprontosil by its favorable effect on streptococcal forms of bacteria, its relative lack of toxicity and its relative lack of absorption, has so far proved the best of the sulfonamide drugs in this type of colitis. Sulfasuxidine has proved a fair second. The results obtained by the use of both of these drugs suggest that they are very welcome allies in effecting a remission of the active phase of this most devastating disease.

In about three out of four cases this form of colitis can be brought to the stage of control by many measures of a program of therapy. However, the problem of preventing recurrences is as great as, if not greater than, that of inducing a remission. Some physicians have suggested the continuous or protracted administration of one of these drugs over a long period. A safer and effective method of achieving this end is the periodic administration of the anticolitis vaccine, prepared from the streptococcus of colitis. It is an established fact that recurrences have been greatly lessened by this procedure. Avoidance of infections of the upper part of the respiratory tract and of undue mental and physical fatigue has gone far toward the control of this and other types of colitis.

Amebic Colitis: Another common type of colitis in which lesions are limited to the large intestine is that caused by Endamoeba histolytica. This condition is so well understood, generally, and the treatment so well established that the newer chemotherapeutic agents find little place in its treatment. Far be it for me to deny any experimental attempts at improvement of therapeutic measures. Numerous physicians have tried the use of various sulfonamide compounds in helping to control amebiasis. Notable among such attempts is one by Knotts and Thompson

Table 1

Bacteriostatic effects of sulfonamide compounds in colonic infections

Bacteria	Sulfanilamide	Sulfapyridine	Sulfathiazole	Sulfadiazine	Sulfaguanidine	Sulfasuxidine	Neoprontosil
Streptococcus (green producing)	+	+	+	+	o	+	+
Streptococcus faecalis	o	o	+	o	o	+	+
Beta Hemolytic streptococci	+	+	+	+	+	+	+
Enterococci	o	o	o	o	+	+	+
Streptococcus of colitis	+	+	o	o	+	+	+
Staphylococci	+	+	+	+	o	+	o
Escherichia coli	o	o	o	o	+	+	o
Eberthella typhosa	o	o	o	o	o	o	o
Paratyphoid bacilli	+	o	+	o	o	+	o
Shigella paradysenteriae	+	o	+	o	+	+	o

with sulfasuxidine. They report favorable results and eradication of amebae from the stools by this drug. Large amounts of the drug are necessary. I should hesitate to replace the well-established regimen of emetine, carbarsone and one or the other of the complex iodine preparations, by any of the sulfonamide drugs in the treatment of amebic colitis.

Colitis Due to the Virus of Venereal Lymphogranuloma: A third form of ulcerative colitis in which the lesions are limited to the large intestine is that caused by the virus of venereal lymphogranuloma. Here again the lesions start in the rectum and distal segments of the large intestine. The disease is also of the wall of the bowel but involves not only the wall but the lymphatic structures around it and so there developes a condition in which a stiff tube having the feel and giving obviously the appearance through the proctoscope of perirectal inflammation exists. There may be multiple small sinuses from the mucous membrane to the deeper structures and so a rather definite proctoscopic and roentgenologic picture results. The disease will be limited to the rectum and rectosigmoid structures and the normal bowel will be reached much more abruptly than in the streptococcal variety. Almost invariably the patient will feel generally well and his complaints will be very largely in reference to the local rectal condition. The diagnosis in this type of case will depend largely on the history of previous venereal infection, possibly the presence of buboes and in a woman very commonly the presence of preceding vulval lesions. The Frei reaction will be positive. But even if these conditions exist, the diagnosis of colitis due to the virus of venereal lymphogranuloma is not tenable if characteristic lesions of the rectum do not exist.

The treatment of colitis due to the virus of venereal lymphogranuloma has always taxed the ingenuity of physicians. The disease is usually so advanced and the tissues about the rectum and sigmoid are so infiltrated with products of inflammation and fibrous tissue that reversal of the process seems impossible. Many medications have been used to affect the active phase of the disease. Since the advent of the sulfonamide compounds, many of these have been tried. The ones which have yielded the greatest success and have met with the best response are sulfathiazole, sulfasuxidine and sulfaguanidine. They have been given both by mouth and as rectal instillations. The disadvantage of sulfathiazole lies in the fact that there is considerable systemic absorption and therefore the drug cannot be given over any extent of time with safety. The advantage of the other two lies in just this fact: namely, that large amounts can be given over long periods without toxic effects. Little or no change may occur in the symptoms for the first week or two of the administration of the drug. At the end of that time, there frequently appears progressive change for the better. The number of the stools will be reduced, less straining at stool will occur, bleeding will subside and a general feeling of well-being will occur. It is well to give the drug in doses of 8 to 12 gm. a day over a period of six or eight weeks. In that time, often striking change for the better will appear in the lining of the rectum. The perirectal tissues will seem to soften up and the lumen of the bowel becomes somewhat larger. Many other supportive measures of course will come into play. It has frequently been said that, once the rectal complication of venereal lymphogranuloma develops, the patient will always die with the disease but never from it. Perhaps the sulfonamide drugs will help to change this statement. Fairly frequently the rectal narrowing becomes so great that an intestinal stoma becomes necessary above the diseased segment of bowel.

Regional Ulcerative Colitis: The fourth type of ulcerative colitis in which the lesions are limited to the large intestine is one of which the cause is not clear. We speak of it as a regional type of ulcerative colitis. The lesions involve isolated segments of intestine and may involve any segment, much in the manner of regional ileitis except that here the site of the disease is the colon. The lesions may be subacute or chronic and usually are quite destructive but also there may be evidence of hyperplastic changes. Commonly segments of the intestine from 6 to 12 inches (15 to 30 cm.) long are found to be involved with perfectly normal bowel distal and proximal to the lesion and always the rectum is not involved. In other words, this segmental type of colitis involves regions of the large intestine above the view of the sigmoidoscope. The wall of the involved segment is also stiff and thickened but the involvement is not as diffuse, regular and smooth as in the streptococcal type of ulcerative colitis. Thus, the roentgeno-

logic examination is the most important objective method of establishing a diagnosis. Usually such a regional type of colitis remains localized to a segment of large intestine for months or years. Very occasionally, however, it has been known to spreal orad and caudad so that ultimately even the distal portion of the ileum has become involved. The latter has initiated a difficult situation, indeed, and has always brought up the question of whether this and so-called regional ileitis may not be the same or closely related conditions. However, the fact that the condition usually remains localized to the large intestine, whereas regional ileitis commonly spreads from the ileum proximal to involve the jejunum and distad to involve the cecum and ascending colon, raises a very definite question of their being separate entities.

We have recently collected a series of more than 100 of these cases from the records of the Mayo Clinic. They represent a characteristic clinical syndrome, which seems to set the group off as an entity.

As far as the results are concerned, the most satisfactory treatment, as in regional ileitis when the lesions involve an isolated segment of bowel, is resection. Now surgical procedures in the presence of extensively diseased bowel, infiltrated as the bowel is by inflammatory tissue from mucosa to serosa, are not without risk. The time chosen for operation is of the utmost importance. The operation should not be undertaken when the disease is active and associated with fever and all the concomitants of a severe infectious process. It should be done, if possible, during the stage of quiescence of the disease. Here the sulfonamide drugs have particular value. Sulfasuxidine, sulfathalidine and sulfaguanidine in amounts prescribed for regional enteritis have been of significant help in bringing the condition to a stage of quiescence. Furthermore, occasionally such striking improvement has occurred, causing even improvement in roentgenologic appearance of the bowel, that surgical intervention later was found unnecessary.

Ulcerative Colitis of Unknown Cause: We come now to a fairly large group of cases of ulcerative ileocolitis of unknown cause. The cases of regional colitis may or may not represent a part of this larger group of cases. Pathologically and therefore roentgenologically, they have features in common. However, the two groups have some strikingly dissimilar features. The ulcerative disease is usually more extensive than the regional type, involving long stretches of small and large intestine or it may involve only the rectum and sigmoid portions. Whatever segment is involved, the appearance of the lesions is at variance with most of the conditions described and strikingly at variance with the appearance of the bowel in the streptococcal variety of ulcerative colitis. No specific agglutinins are present in the blood serum. Cultures made from the lesions and examinations of the stools are not diagnostic. The lesions are irregularly distributed and tend to resemble those of amebiasis or tuberculosis. Yet usually one will detect differences. The difference is sometimes hard to describe and it has been said that the ulcers are characteristic by being so uncharacteristic. This is the group of cases that will particularly tax the physician's ingenuity and the response to one form of therapy or another will often be minimal. All the sulfonamide drugs mentioned may be given a trial in these cases. Sometimes the response is very striking; more often the result is such that one cannot say that the drug employed was of benefit. At times actually increased activation of symptoms has occurred during the administration of one or another of the sulfonamide drugs. All the supportive measures employed in the treatment of a severe, destructive infectious disease have been brought to bear. Surgical treatment, and this means ileostomy, and possibly colectomy, has been employed more commonly in these cases than in any others.

Bacillary Dysentery: In recent years it has become more and more apparent that bacillary dysentery should be regarded not as a local disease of the intestines but as a systemic one in which the intestinal lesions are secondary. The experimental work of Penner and Bernheim in particular tends to substantiate this thesis. This may well be the answer to the difference in results reported by various investigators of the superiority of sulfaguanidine and sulfasuxidine in the treatment of bacillary dysentery over the more soluble sulfonamide compounds. Thus some clinicians have reported better results from the use of sulfapyridine than of sulfaguanidine, emphasizing a point that it is more desirable to maintain a sat-

isfactory amount of the drug in the blood than in the bowel. Sulfadiazine has been found most effective in rapidly controlling massive infections with the Sonne variety of bacilli, and sulfasuxidine the best in ridding convalescents and passive carriers of Sonne bacilli.

The most impressive reports come from the British investigators. Thus, Bulmer and Priest in a report on 2,066 soldiers suffering from acute diarrheal diseases in a military hospital in the middle East found a fourth of them suffering from bacillary dysentery. Stating that they felt diffident in trying to appraise the effects of a new drug upon a disease which differs so much in its severity and course in different parts of the world, and at different seasons, they expressed the belief nevertheless that their experiences suggest that the specificity of sulfaguanidine in dysentery is comparable to that of other members of the sulfonamide group in their appropriate indications. Their cases were chiefly of the Shiga-Smitz and Flexner-Sonne varieties. Only twenty-one deaths occurred among 566 patients. In only four cases of severe dysentery was the Shiga antiserum used. In their cases they gave an initial dose of 6 gm. of sulfaguanidine followed by doses of 3 gm. at four-hourly intervals until a fecal porridgy stool and general clinical improvement had been maintained for two or three days; 3 gm. thrice daily was given for a further three or more days.

Lyon stated that sulfaguanidine is quite as effective in the treatment of acute bacillary dysentery as sulfanilamide is in the treatment of some streptococcal infections or as the other sulfonamide compounds are in pneumococcal infections.

Fairley and Boyd stated that, from their experience in a series of 500 cases, mostly of the Flexner and Shiga variety, every patient suffering from dysentery should receive sulfaguanidine at the earliest possible moment. On the other hand, Paulley reported from the Middle East that sulfapyridine has advantages over sulfaguanidine. The Medical Research Council of Great Britain reported that Shiga infections are often severe and require the maximal dosage of sulfaguanidine, which they suggested as 5 gm. three to four times daily for three days and then 5 gm. twice daily for four days. The earlier the treatment is begun, the more rapid will be the clinical cure. In fulminating toxic cases, 50,000 to 100,000 units of antidysentery serum (Shiga) should also be given intravenously. Flexner infections will usually require only 3 gm. of sulfaguanidine three to four times daily, and so forth. Convalescent carriers are common among untreated patients, and these, together with symptomless contact carriers, can usually be cured by a course of sulfaguanidine. Sonne infections are ordinarily mild, and sulfonamide therapy is aimed more at cure of the convalescent carrier-state than of the clinical infection. In these cases succinyl sulfathiazole may give better results. Sulfapyridine can be given in any of these infections if sulfaguanidine and sulfasuxidine are not available. It is more toxic than they, as we all know. Sulfanilamide is not effective.

Smith and his associates have found that sulfasuxidine does not have any advantage over sulfaguanidine as far as fever, diarrhea and time required for stool cultures to become negative are concerned. The two drugs are equally effective in the treatment of cases of Shigella dysenteriae (Flexner) infection, but because sulfasuxidine is potentially less toxic than sulfaguanidine, it is the drug of choice.

It should also be mentioned that sulfathiazole has been found valuable in the treatment of dysentery of children whose stools were positive for organisms of the Shigella dysenteriae group and Salmonella. A controlled study by Rubens, Kaplan, Borovsky and Blatt is particularly enlightening on this subject. They gave 1½ grains per pound (0.2 gm. per kilogram) of body weight per day, in six equal doses at four hour intervals.

In some cases dysentery due to one of the organisms of the Shigella paradysenteriae group, or to secondary invaders, continues for weeks and perhaps months, reaching finally the stage known as chronic bacillary dysentery. In such cases a highly bizarre picture of ulcerative ileocolitis develops. When lesions are visible through the sigmoidoscope, their irregularity as far as size, extent and mucosal appearance are concerned is particularly striking. It has been said that the ulcers are characteristic because of their irregular and yet extensive distribution. The same impression is gained from the roentgenologic appearance of the bowel in these cases. The diagnosis will still depend largely on the presence in the blood of agglutinins of one or several strains of Shigella paradysenteriae in significant titer.

In these cases there is also frequently an early and marked response to treatment with sulfaguanidine and sulfasuxidine. Large amounts of the drugs should be given. Brewer in reporting a series of cases from a general hospital in the Middle East stated that he gave 17.5 gm. of sulfaguanidine daily, divided into five equal doses. Poth, Chenoweth and Knotts used doses of from 0.25 to 1 gm. of sulfasuxidine per kilogram of body weight daily, divided into six equal portions. They stated that this drug is equally effective in the acute and the chronic forms of the disease.

CHOLERA: Hope that the deadly Asiatic cholera can be conquered by sulfonamide drugs appears in a recent report by Griffitts. A single injection of sulfadiazine saved 50 per cent of mice inoculated with enough cholera germs to kill ninety out of 100 animals in twenty-four hours. Sulfadiazine and sulfathiazole were effective whether given by injection or into the stomachs of the cholera infected mice. India is recognized as the home of cholera but the disease can spread along lines of travel and troop movements unless checked by rigid sanitary precautions. It is caught by drinking contaminated water and by eating food contaminated with the vibrio. Anti-cholera vaccine, which has been ordered for all United States soldiers likely to serve in cholera infected regions, gives the recipient immunity against the disease for about a year. Clinical results obtained in the treatment of cholera by sulfaguanidine have been reported by Chopra, de Monte, Gupta and Chatterji. They used rather small doses. It would seem advisable to try the heavy doses used for bacillary dysentery.

COMMENT

The problem of intestinal disorders in which sulfonamide compounds can be used and have been used is, of course, a large one. I have mentioned only the important ones and those in which either some results have been achieved or else hopes of achievement are in the offing. There is no evidence so far that typhoid fever will be affected by any of the sulfonamide drugs so far available. There are numerous other intestinal infections in which little can be expected by the use of these drugs. One other condition which might be mentioned in which some improvement has been noted with the use of sulfaguanidine is so-called gastro-enteritis of children of unknown cause. There will undoubtedly be many other intestinal infections which will be benefited with the passing of time and the increased knowledge of these drugs.

OCCUPATIONAL DISEASES

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Among the classifications of occupational hazards the one of Dublin and Vane is as follows:

1. Abnormalities of air pressure
2. Abnormalities of temperature and humidity.
3. Dampness.
4. Defective illumination.
5. Dust.
6. Infections.
7. Radiant energy.
8. Repeated motion, pressure, shock, etc.
9. Poisons.

When classified according to causative agent, specified occupational diseases fall into six or so major groups according to a review of various compensation laws subscribing to schedule coverage. Under toxic metals or metalloids may be listed poisoning by arsenic, zinc or brass, cadmium, lead, manganese, phosphorus, radium, and mercury. Under dusts are listed pneumonoconiosis with or without silicosis and with or without tuberculosis; also asbestosis with or without tuberculosis. Under gases, vapors and fumes are the poisonings caused by hydrogen fluoride, nitrous fumes, sulfur dioxide, carbon disulfide, hydrogen sulfide, hydrogen cyanide, carbon monoxide, nickel carbonyl, halogenated hydrocarbons, methyl alcohol, benzene, and nitro and amino derivatives of gasoline, benzene, and phenol. Occupational skin hazards include chrome ulceration or chrome dermatitis, infection or inflammation of the eyes and skin due to oils, the cutting compounds, lubricants, dusts, liquids, fumes, gases and vapors, epitheliomatous cancer or ulceration of the skin or surface of the eyes to pitch, tar and bitumen, the various dermatitis classified as venenata, the contact dermatitis producing agents such as trinitrotoluene, dinitrotoluene, and most particularly tetryl. Under the infectious agents may be listed such diseases as anthrax and glanders. Under physical agents may be listed com-

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pressed air illness, radioactive substances, the cataract of miners, and impaired hearing caused by noise and vibration.

With few exceptions, the serious and prevalent occupational diseases of prewar days may be anticipated as being the sources of difficulty in wartime industrial production. Cunningham of Canada has given us some idea of what we may expect from the changeover to war production. He states that the number of cases of occupational diseases have increased in the Dominion, but up to the present they have come from increased exposure to common substances rather than from new processes.

Exclusive of dermatoses, industrial poisonings make up the majority of the occupational diseases. The progressive industrial physician moreover recognizes the need of studying the toxic properties of new substances or chemicals prior to the establishment of a new industrial process. He is aware of the fact that absorption of metals and their compounds does not as a rule induce the same reaction or degree of action in the body as the metal or its compounds when used for therapeutic purposes. In other words, industrial intoxications are characteristically chronic in contradistinction to acute poisonings of usual medico-legal importance. When acute, disability ordinarily occurs on the day of exposure and the disease entity is then usually considered an accident. The portals of entry for industrial poisons are (1) by inhalation, (2) by mouth, (3) through the skin, and (4) through the subcutaneous tissues. Broadly speaking, the respiratory route is characteristic of most industrial poisons.

Because an occupational disease is related to the personal activity of the worker and is of the nature of the inevitable consequences of a given type of work, medical questions are bound to arise in the settlement of occupational disease claims. Besides the nature, extent, and duration of disability, questions of etiology and differential diagnosis need to be established. To solve these questions the industrial physician should have a clear conception of the time factor in the evolution of these diseases. Related to this time factor is a latent period without disability somewhat analogous to the incubation period of infectious diseases. In silicosis, for instance, it may require the passage of from 2 to 25 years of industrial dust exposure before the disease manifests itself clinically in a given worker. Needless to say, it is important to have a record of the nature of exposure in different types of work in the form of an occupational history. This may be a time-consuming inquiry, particularly in the case of a miner who has worked in many different mines over a period of 30 years or so, or in the instance of a worker potentially a victim of metal poisoning from whom the physician endeavors to learn the circumstances, such as the lack of ventilation, chemicals involved, and nature of the work process, which have precipitated the toxic episode. Other steps in diagnosis make the same demands on the physician's acumen as other disease entities.

About 150 industrial occupations entail a possible lead exposure. The principal hazards occur in: storage battery manufacture; paint industry; application of paints; enameling of such articles as bath tubs; pottery glazing; reclamation of lead from junk metals, lead arsenate manufacture, printing industry, welding and riveting in enclosed spaces, steel painted with red lead; rubber manufacture; lead ore mining; tetraethyl lead manufacture, or cleaning tanks in which ethyl gasoline has been stored, electric arc or acetylene welding of lead coated steel.

Among the most commonly used lead compounds are lead carbonate, lead chromate, red lead, lead sulfate, litharge, lead acetate, lead arsenate, and tetraethyl lead.

Lead absorption into the tissues is cumulative in the sense that a part of the relatively small daily doses, individually insignificant, which is absorbed each day, is not eliminated promptly. When physiologic tolerance is exceeded, symptoms and disability occur. Lead enters the body in industrial work principally through the respiratory tract. Organic lead compounds, for example, tetraethyl lead, may enter through the unbroken skin. The maximal permissible concentration for lead is 1.5 mg. per 10 cubic meters of air, and this quantity may be considered as a daily dose which should not be exceeded if disability is to be prevented.

Industrial lead poisoning ordinarily occurs following prolonged exposure to lead or its compounds. Classified on the basis of systems, the three more or less distinct clinical types of lead poisoning seen currently among American industrial workers are alimentary, neuromotor, and encephalic. Some cases show a combina-

tion of two or more of these principal clinical manifestations.

The alimentary type is the most frequent in occurrence. It is characterized by abdominal discomfort or pain which culminates in frank colic in the most severely affected cases. Obstinate constipation is occasionally preceded by a brief period of diarrhea. Among the other complaints in this type of case are loss of appetite, nausea and vomiting, metallic taste, lassitude, insomnia, general weakness or asthenia, arthralgia, myalgia, irritability, dizziness, and headache. Accompanying these symptoms may be the following signs: ashen pallor, lead line on gums, pyorrhea, malnutrition, abdominal tenderness, basophilic stippling, reduced hemoglobin and red blood cell count (but may be within normal limits), slight albuminuria, and elevation of lead content of blood and urine. When a typical episode of colic is in progress, the patient is obviously in agonizing pain, bathed in cold sweat, has gray-green pallor, and is likely to be doubled up with hands pressing upon his abdomen. During a spasm the abdomen has a board-like rigidity. Between spasms, the abdominal pain is usually relieved by firm pressure. The pain of lead colic is usually promptly relieved by intravenous administration of calcium chloride or calcium gluconate.

The gingival lead line, if present, will show up as finely punctate bluish-black deposits in the gum tissue. It should not be confused with the congestion of chronic gingivitis, discolored calculus on the tooth surface, or the normal pigment deposits observed in the gums of Negroes and other dark-skinned races. The effects of congestion can be overcome by pressure with a transparent applicator such as a glass slide.

In the neuromuscular type, the chief complaint arises from weakness, perhaps the paralysis (wrist drop) of the extensor muscle groups of forearm and hand. The paralysis may be unilateral or bilateral. When unilateral, it is likely to affect the arm most used. If a lower extremity is involved, foot drop may be present. Gastroenteric symptoms, though not absent, are less disturbing. Arthralgia, myalgia, aching, and stiffness of muscle groups are likely to be more severe than in the alimentary type. Headache, vertigo, insomnia, and disturbed sleep are likely to be prominent symptoms. True palsy is uncommon today; it is usually the result of prolonged and severe lead exposure, and clinical history may give evidence of repeated episodes of intoxication of milder type.

Lead encephalopathy is the most severe but fortunately the rarest manifestation of lead poisoning. In the industrial worker it follows rapid, heavy lead absorption. Certain organic lead compounds, such as tetraethyl lead, are absorbed rapidly (through the skin as well as other portals of entry) into the body and especially into the central nervous system. With these compounds, encephalopathy is the rule. Comparable concentrations of lead are absorbed into the brain from inorganic lead compounds only when the workplace is heavily contaminated with lead vapor, fume, or dust.

Lead encephalopathy begins abruptly and is characterized by signs of cerebral and meningeal involvement. The patient may be in a heavy stupor at the onset and go into coma, with or without convulsion, and die. Excitation, confusion, and mania occur less frequently. Headache, dizziness, insomnia, and somnolence are symptoms in cases recovering and of shorter duration.

The cerebrospinal fluid may be increased in pressure and show slight increase in cellular elements and globulin.

Laboratory findings supplement the clinical findings and are of considerable assistance in differential diagnosis. They should not be expected to yield the diagnosis.

Evidence of the effect of lead on the hematopoietic system is ascertained by a study of the blood picture. Basophilic granulation or stippling of erythrocytes should be ascertained in quantitative terms and related to an established normal standard. According to Mayers, abnormal cell morphology and abnormal cells (including nucleated erythrocytes) are more characteristic than stippled cells and polychromatophilia of lead anemia, even in such cases in which the hemoglobin is as high as 80 per cent and there is a red blood cell count of 4 million.

The blood of normal North Americans has an average lead content of 0.03 mg. (range 0.01 to 0.06) per 100 gm. of whole blood. Normal urinary lead values average 0.03 mg. per liter with values ranging from 0.01 to 0.08 mg. per liter or ranging from 0.005 to 0.12 mg. per liter, depending on the size of the sample submitted for analysis. The finding of abnormal

quantities of lead in blood and excreta means only abnormal lead absorption and hence points to the existence and severity of lead exposure.

Lead intoxication occurs rarely if the mean urinary lead concentration of representative groups of workers is kept below 0.10 mg. per liter, and if individual results are generally below 0.15 mg. per liter and very rarely in excess of 0.20 mg. per liter. The upper limit of safety for the concentration of lead in the blood lies somewhere between 0.05 and 0.07 mg. per 100 gm. The blood levels in frank cases of lead intoxication are usually considerably higher (0.09 to 0.30 mg. per 100 gm. of whole blood). Samples for chemical analysis to determine lead content of blood or excreta should be obtained near the height of an acute episode. Extreme care is necessary to avoid contamination from the time of taking the sample until it is completely analyzed.

The alimentary type must be differentiated from such conditions which may require surgical intervention, as acute appendicitis, acute cholecystitis and cholelithiasis, perforated peptic ulcer, intestinal obstruction, and acute pancreatitis. Neglect of a surgical condition is far more serious for the patient than giving undue weight to apparently significant lead exposure. In such cases "it is better to err on the side of surgical exploration." Jaundice in lead poisoning is rare today. Leucocytosis, and abnormal differential count, would favor inflammatory lesions. Hematuria is very rare in lead colic cases. Intestinal obstruction is difficult to differentiate, but if stippling is absent lead colic may be eliminated. The medical history will afford material differential points and it is particularly helpful in cases of peptic ulcer or coronary thrombosis.

With respect to lead neuropathy or encephalopathy, neurologic changes induced by viruses, infections, arsenic, malnutrition, and alcoholism must be ruled out.

Treatment may be briefly summarized as follows:

1. Discontinue the worker's exposure to lead.
2. Treat the acute episode with large doses of calcium and calcium-rich diet.
3. Later induce catharsis.
4. During convalescence active deleading procedures may be instituted, although some investigators assert that the body will gradually rid itself of excess lead if lead exposure has ceased.
5. Treat cerebral symptoms and sequelae palliatively.

Generally speaking, on recovery from chronic lead poisoning, the worker may return to his former occupation provided the lead exposure responsible for his disability has been brought under control or eliminated. Otherwise, it will be necessary to place him in a job entailing no exposure.

Periodic occupational examinations or check-ups to detect early evidence of dangerous lead absorption should be performed on all workers exposed to a lead hazard, but their frequency must be related to the problem at hand. Workers who are exposed to less than 1.5 mg. of lead per 10 cubic meters of air need not be examined regularly more than once or twice a year, but in extremely hazardous exposures and in young employees it may be necessary to raise this frequency to every fortnight.

Metal fume fever is an acute transient illness often referred to as brass founders' ague, metal shakes, oxide chills, brass chills, galvo, and zinc oxide fever. Although at one time the disease was thought to be caused exclusively by zinc, it is now known to be produced by other metals, for example, cadmium, lead, manganese, mercury, and magnesium. It follows the inhalation of rather heavy concentrations of finely dispersed metal fumes, usually in the form of oxides. Then, under certain circumstances, toxic proteins or albuminates of the metals are said to be formed which produce a severe transient febrile reaction resembling protein shock in nature and symptomatology.

A few hours after exposure, the nose, throat, and substernal region feel dry and sore, burn, and give rise to a dry cough. A feeling of constriction in the chest, headache, and lassitude may be complained of and sometimes nausea and vomiting occur. Symptoms at this stage are similar to the prodromes of an acute respiratory infection. Within one to several hours, the symptoms become aggravated, the headache becomes worse, vision may become blurred as chilly sensations begin to appear, and the victim usually takes to his bed. Shivering or trembling rapidly increases into a more or less severe rigor which may last from one-half to 2 or 3 hours. Fever and leucocytosis not uncommonly accompany and follow the chill. Myalgia and arthralgia are also usually present at this stage. The symptoms as-

sociated with the chill end almost by crisis and are followed by profuse perspiration. Considerable prostration usually follows an attack but by the next morning recovery is usually complete. An entire attack seldom lasts longer than from a few to 20 hours, and for this reason compensation is rarely claimed.

New workers and employees upon their return to work following a holiday or layoff are particularly susceptible to an attack. Workers become "immunized," but this artificial immunity lasts only about 5 days. The illness is also more likely to develop in winter and is aggravated by chilling the body. If symptoms persist for more than a day, it is necessary to look to lead, manganese, cadmium, and arsenic as specific causes. Malaria, influenza, tuberculosis, leukemia, Hodgkin's disease, acute bronchitis, onset of tonsillitis, and septic processes also must be considered in differential diagnosis.

Sayers is of the opinion that metal fume fever may be eliminated through adoption of an adequate medical and engineering program. A study of the industrial exposure responsible for the illness should be requested by the industrial physician. In conducting preplacement or transfer examinations, it should be remembered that the clinical course of chronic respiratory conditions, such as bronchiectasis, asthma, and arrested tuberculosis, and chronic heart disease may be unfavorably influenced by the fever and chills.

The great increase in the use of cadmium, not only for coating marine hardware but also for many fittings that were formerly zinc coated, has created a new problem in industrial hygiene. Most cases of industrial cadmium poisoning have resulted from accidents or short exposure to excessive concentrations of cadmium dust or fume. Little is known of chronic effects upon humans. Acute industrial poisoning is characteristically produced by inhalation of the fumes, particularly where cadmium has been heated to give off the oxide in yellowish-brown fumes.

The clinical picture is characterized by irritation of the respiratory mucous membrane which may eventually lead to pulmonary edema, pneumonitis, or bronchopneumonia. The first symptoms are those of metal fume fever, usually dryness of the throat, cough, chills, headache, vomiting, and a sense of constriction of the chest. Later symptoms are predominantly referable to the respiratory system and are characterized by cough, pain in the chest, severe dyspnea, and prostration. A few cases have gastro-intestinal complaints.

Poisoning with nitrous fumes and methyl bromide may be ruled out by history. Metal fume fever caused by zinc oxide fumes usually clears up within 24 hours. Therefore, the continuance and aggravation of symptoms such as occur with irritant gases which produce acute pulmonary congestion make it imperative to consider cadmium. These serious delayed symptoms should not be confused with nonoccupational diseases.

Treatment is palliative. Oxygen should be used in moderately and severely affected cases without waiting for signs of pneumonia. Rest is acutely essential as is the withdrawal of the worker from the source of contact.

Manganese is used principally in the manufacture of alloys, for example, ferromanganese, and to a lesser extent in the manufacture of dry cell batteries, paints, matches, and fireworks, and in leather tanning. In the crude black ore most of the manganese is present in the form of the dioxide.

Industrial manganese poisoning is a chronic disease characterized by neurologic symptoms and is usually the consequence of inhaling manganese dust or fumes. The important symptoms are muscular stiffness, twitching and incoordination, giving rise to difficulty in walking, and propulsion gait. Speech defects, a mask-like facial expression, drowsiness, weakness, and emotional instability may also be present. In differential diagnosis, disseminated sclerosis, paralysis agitans, and progressive lenticular degeneration must be ruled out.

Flinn, Neal and Fulton advise quarterly medical examinations of workers exposed to manganese dust and the immediate transfer to a manganese-free environment of any worker showing signs of early poisoning, until the hazard has been controlled.

The principal ore from which mercury is derived is cinnabar, or mercuric sulfide. Some cinnabar mines also yield native quick-silver. In 1940 there were 159 mercury-producing mines in the United States and Alaska with the greatest production coming from the States of California, Oregon and Nevada. Besides the mining of mercury, some other potential sources of mercury hazard arise from its use in ther-

mometers, barometers, extraction of gold from its ores, dental alloys, mercury arc lamps and rectifiers, anti-fouling marine paints, agricultural disinfectants, radio equipment, analytical laboratories, explosives and certain chemical industries. Dublin and Vane list about 100 occupations in which mercury may be a hazard. Mercury is being replaced in the fur-hatting industry by less toxic chemicals.

Industrial mercury poisoning occurs almost exclusively from the inhalation of mercury vapor or dust of the metal and its salts, yet poisoning through the ingestion, cutaneous, and subcutaneous routes may infrequently occur. Elemental mercury gives off vapor at ordinary room temperatures. Mercury is "a general protoplasmic poison." After it gains entrance to the circulation, it is rapidly taken up by the tissues. The form in which mercury circulates in the body is not definitely known though some feel it is as an albuminate such as mercury chloro-albuminate, or oxy-chloroalbuminate.

The cardinal symptoms of industrial mercurialism are stomatitis, psychic disturbance and tremors. These symptoms are not present simultaneously in all cases nor in the same degree. Industrial mercury poisoning is typically chronic though cases of severe, rapidly developing mercurialism characterized by colicky pain, diarrhea, painful stomatitis, and excessive salivation may occur occasionally "in such jobs as mining metallic mercury, when the silver runs free, as the miners say, and the mine is hot." There is rarely much kidney involvement in the industrial form of the disease. A blue line on the gums resembling that due to lead absorption is seen in a few cases. Tremor and other signs of neurologic origin are more characteristic of an insidious, slow form of poisoning. The tremor is observed mainly in the muscles of the face, hands and arms; it is intention in type, becoming most apparent while the patient is doing an unusual task. As the tremor grows worse, shaking or convulsive movements are added to the tremor, giving rise to the typical picture of hatters' shakes. Mercurial erethism or psychic irritability is intimately related to the tremor and may include or lead to loss of memory, insomnia, and depression. Hyperactive knee jerks and scanning speech are frequently present in advanced cases.

Mercury fulminate rarely produces symptoms of systemic mercurial poisoning; the cases are usually characterized by a dermatosis associated with conjunctivitis and inflammation of mucous membranes of the nose and throat.

Because luminous dials are needed on instruments in night operations of the armed forces, there has been a great increase in the use of luminous paints. These paints are usually a mixture of phosphorescent zinc sulfate and radium, mesothorium, or other similar radioactive substances. Another source of industrial disease is in the mining and refining of radioactive ores.

The harmful effects of radium are caused by ingestion, inhalation, injection of radioactive substances, or whole body exposure to gamma radiation. It is necessary to understand the genetic connection of all members of the radium family because these elements taken all together produce the effects ascribed to radium.

The damage produced by various types of radiation is determined by their nature and properties, thus, (1) alpha rays have enormous energy but low power of penetration and to produce injury they must come in intimate contact with the tissues they injure; (2) beta rays penetrate several feet of air, and (3) the gamma rays can penetrate several centimeters of lead.

All radium disintegrates at a slow but definite rate into radon, a radioactive gas. In the body of a victim of radium poisoning, some of the radon is exhaled and that which is not exhaled disintegrates in situ into a series of solid radioactive substances, eventually becoming lead. Like lead, radium has been shown to be stored largely in the bones. Radium induces bone injury as well as damage to the hematopoietic system. It is eliminated mainly in the feces. Although only about 10 per cent of the amount of radium taken into the body becomes fixed in the tissues, this fraction exposes the tissues to the destructive action of the radiations from the various members of the radium family. Among dial painters tissue damage is almost entirely due to alpha radiation, as studies of bone deposits show that about 92 per cent of the radiation is alpha and only 8 per cent beta and gamma.

The common industrial form of radium poisoning, such as occurs in radium dial painting, should not be confused with the deleterious effects of external application. The industrial form is an insidious chronic disease. The patient for many years after exposure remains in good health. Accord-

ing to Martland patients having 120 to 180 micrograms of radium in their bodies will usually develop extensive radiation osteitis within 1 to 5 years. A complicating bacterial, dental infection will not uncommonly lead to extensive necrosis of the jaw bones. Macrocytic, hyperchromic anemia may develop at first, followed by aplastic anemia. Patients retaining 2 to 20 micrograms of radium often escape jaw necrosis, but tend to develop crippling bone lesions such as coxa vara, osteoporosis of the flat bones of the skull, deformities of the spine, spinal fractures and osteogenic sarcomata.

Even such small amounts as 1 to 2 micrograms may produce definite bone change. When the amount of radium a worker has deposited in his body exceeds 0.1 microgram, as revealed by the expired air test, immediate change of his occupation and treatment by decalcification therapy or other mode of therapy which may have been developed is recommended. Curtiss states that if a sample of exhaled air is found to contain more than 10-12 curie of radon per liter, it indicates that at least 0.1 microgram of fixed radium exists in the body.

Treatment is largely symptomatic. The decalcifying therapy of a low calcium diet and ammonium chloride, as used by Aub and his co-workers, has been shown to increase the excretion of radium, but it does not greatly reduce the total deposition of radium in the body. This method of therapy is possibly of value early in the disease when the radium is contained in the trabeculae rather than in the cortex of the bone.

As regards medical control, thorough medical and dental examinations should be performed before employment. The complete blood count made at the time of pre-employment examination serves as a reference index for subsequent blood counts. Periodic occupational examinations including hematologic studies should be made at intervals of about one month and particular attention given to the trend of successive blood counts. Many authorities prefer to have the expired air radon test, which is made at intervals of six months or one year, because a dangerous radium accumulation may be detected in this way before it has had time to induce changes in the blood picture. Leucopenia, relative lymphocytosis, or beginning anemia calls for careful investigation and possibly change of occupation for the worker concerned.

Pneumoconiosis is a broad generic term applied to all dust affections of the lungs. In a more restricted sense, it means pulmonary fibrosis induced by inhaled mineral dust. The committee on Pneumoconiosis of the American Public Health Association defines silicosis as "a disease due to breathing air containing silica, characterized anatomically by generalized fibrotic changes and the development of miliary nodulation in both lungs, and clinically by shortness of breath, decreased chest expansion, lessened capacity for work, absence of fever, increased susceptibility to tuberculosis (some or all of which symptoms may be present) and by characteristic X-ray findings."

On the basis of the structural changes induced in the lung and the type of dust, the pneumoconioses or pulmonary fibroses may be classified as follows:

1. Simple benign pneumoconiosis, which is virtually a deposition of dust in the pulmonary tissues usually accompanied by pigmentation, and includes, for example, anthracosis induced by coal dust and siderosis induced by iron. It does not incapacitate and roentgenologically shows as a maximum change only an exaggeration of linear pulmonic markings and is of clinical interest only by way of differential diagnosis. Such cases should never be diagnosed as silicosis.

2. Silicosis, which is a pathologic pulmonary reaction due to free silica; for example, sandblasters' silicosis. This type of pneumoconiosis results in a classical nodular fibrosis of both lungs, demonstrable both in the X-ray and at post mortem. Massive fibrosis, varying degrees of pigmentation, atelectasis, emphysema, fibrous pleurisy, bronchitis, cavitation and pneumothorax are among the concomitant pathologic changes.

3. Mixed forms, that is, silicosis resulting from the inhalation of mixtures of varying amounts of free silica and more inert pneumoconiogenic dust constituents, for example, anthracosilicosis and silerosilicosis. Most cases of silicosis undoubtedly come under this classification.

4. Asbestosis, a characteristic diffuse, interstitial fibrosis of the lungs, induced by fibrous minerals which, according to animal experimentation, is due to the mechanical action of the asbestos, producing a ground-glass appearance on the X-ray. It may cause disability and a few fatal cases have been recorded.

Silicosis is incurable and large numbers

of workmen are potentially exposed to conditions favoring the development of the disease. The majority of cases of this chronic pulmonary disease occur among workers engaged in mining, quarrying, ceramics industry, tunnel construction, sandblasting, and foundry work.

Inhalation of siliceous dust almost invariably results in silicosis if a certain set of conditions has prevailed during the working experience of the worker. Among these silicosis-producing conditions are:

1. The dust must be of respirable size (usually 0.5 to 3 microns).

2. The dust must be present in the atmosphere at the breathing level of the worker in concentrations exceeding 5 million free silica particles per cubic foot.

3. The dust must be inhaled for a number of years.

4. The dust must contain silica in a free state, such as quartz.

Generally speaking, the inhalation of high concentrations of respirable high quartz dust produces disabling disease in a shorter period of time than the inhalation of low concentrations of dust or dust of low quartz content.

The following states, which include the 11 States subscribing to blanket coverage, either list silicosis in schedule occupational disease laws, or make certain provisions for the disease: Arkansas, California, Connecticut, Delaware, Idaho, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Michigan, Missouri, Montana, New York, North Carolina, North Dakota, Ohio, Pennsylvania, Utah, Washington, West Virginia, and Wisconsin.

It has been estimated on the basis of the 1930 census that between 500,000 and 1,000,000 workers are exposed to silica dust. Clinical investigations, including X-ray studies, in various dusty trades have shown that from 8 to 25 per cent of the employed workers have potentially disabling pneumoconiosis; thus a high proportion of workers in these dusty trades would appear to have escaped the disease. This resistance of some workers, however, is more apparent than real if consideration is given to the relatively long latent period required before the disease can be demonstrated clinically or even by X-ray study.

A great majority of the cases develop after at least 7 years of exposure, although a few cases have developed in as short a period of time as 1½ years. At the other extreme, with exposures to low concentrations of free silica, more than 30 years may have to elapse before the disease developes to a stage when it can be diagnosed.

The worker showing X-ray evidence of an early to a moderate amount of a simple silicotic involvement has few symptoms. Moreover, symptoms and physical signs are of little help in determining whether the patient has a silicosis, a modified silicosis (for example, anthracosilicosis), or asbestosis. Symptoms and signs do, however, assist in the determination of disability. Among the symptoms and signs of importance are shortness of breath, particularly upon exercise; cough, usually dry; chest pain, varying from a feeling of tightness in the chest to the sharp, excruciating pain typical of pleurisy; hemoptysis; general complaints such as digestive disturbances, insomnia, and dizziness; decrease in chest expansion; prolonged expiration, especially in association with emphysema; altered breath sounds; rales; and the presence of areas of increased density in the lungs. Infection may complicate the picture at any time and is usually manifested by pleural pain, fever, night sweats, weight loss, aggravation of dyspnea, anorexia, weakness, and a cough producing large amounts of blood-tinged sputum.

In establishing a diagnosis of one of the pneumoconioses, all of the following three factors should be considered.

1. An occupational history which reveals definite prolonged exposure to siliceous dust or asbestos dust.

2. Symptoms and physical signs which furnish valuable information in (a) gauging the extent to which pneumoconiosis has progressed, (b) showing the degree of disability, and (c) excluding other diseases.

3. X-ray findings, which, if classified on the basis of the system recommended by the U. S. Public Health Service, show bilateral ground-glass nodular, or a more advanced type of lung-field marking.

So long as the chest roentgenograms show predominantly linear pulmonic markings, silicosis or modified silicosis need not be given serious consideration. It is when the shadows in the lung field assume a ground-glass, granular or nodular appearance that they become specific and assume more diagnostic characteristics. Using Irvine and Stuart's analogy, the usual linear pulmonic markings are likened to the branches of a tree and the granu-

lar, stippled, or nodular lung-field markings simulate the leaves. Complete foliation then means silicosis. Viewed stereoscopically, the films at this stage will show fine nodulation. Some writers describe a related change in the lung-field appearance as reticulation. Although not definitely determined, this type of lung-field marking may result from the inhalation of mixed dusts. Later stages will show massive areas of fibrosis, and if infection is present the X-ray shadows tend to asymmetrical.

Asbestosis is exceptional from the standpoint that the pulmonary fibrosis is caused by dust containing little if any free silica. The asbestotic patient will usually show clinical symptoms and signs which are out of proportion to the apparently small amount of pulmonary involvement shown by the chest roentgenogram. Large massive shadows are rarely seen in the chest roentgenogram except in the presence of a complicating infection. On the contrary, the diffuse interstitial fibrosis is manifested by a ground-glass appearance, frequently with fine pinpoint stippling of the middle and lower lung fields. It progresses to terminal diffuse fibrosis usually without nodular predominance in about twenty years. A shaggy appearing cardiac silhouette due to involvement of superimposed lung structures and pleuropericarditis is not infrequent. Asbestosis bodies may be demonstrated in the sputum or the lung tissue.

All applicants for employment in dusty trades should be examined by X-ray. Periodic medical examinations at intervals of one year to possibly three years, including X-ray study of the chest, should be made of all workers in dusty trades in order to detect evidence of active pulmonary tuberculosis and early silicotic changes. The length of the interval between examinations depends mainly on the degree of hazard and the prevalence of endemic tuberculosis.

Clinical study of patients suspected of having pulmonary tuberculosis should be made to determine the dynamic status of such complication. No worker should be rejected on preemployment examination or removed from work, which he is accustomed to perform, merely because of a diagnosis of simple silicosis, but rather the atmospheric dust in which he works should be brought within safe limits. The worker whose first roentgenogram shows healed primary tuberculosis should not be denied employment in a dusty trade on this account alone. If the worker has minimal, arrested, or healed reinfection tuberculosis, he should be allowed to continue his work but should be observed with the same precautions as a man with simple silicosis. Close medical supervision is recommended for all silicotic workers in order to control or prevent serious complications of the common respiratory infections.

Benzene (benzol) is an excellent solvent for gums, resins, fats and oils, and as such has found many industrial applications. It is used in the manufacture of rubber, rubber goods, linoleum, quick drying paints, lacquers, stains, paint removers, and plastics. Benzene should not be confused with the less toxic petroleum product, benzine, which is a mixture mainly of aliphatic hydrocarbons.

The most characteristic pathologic changes in cases of benzene poisoning are seen in the bone marrow which may show gradations of change from hyperplasia to hypoplasia and occasionally complete aplasia of the myeloic cells. Other parts of the hematopoietic system may also be involved. Depending on the degree of exposure, secondary degenerative changes are observed in the liver, kidneys, and heart.

Acute benzene poisoning follows the inhalation of benzene vapors in high concentration and provokes narcotic symptoms such as inebriation, fatigue, sleepiness, vertigo, tinitus, nausea, vomiting, and headache. If exposure is prolonged, muscular twitching, convulsions, paralysis, and loss of consciousness may result. With very large doses, unconsciousness, convulsions and death due to respiratory paralysis may occur rapidly.

The more typical industrial benzene poisoning is chronic and is a complex hematologic syndrome characterized by anemia, purpura, and granulocytopenia. The associated subjective complaints are fatigue, somnolence, headache, vertigo, general debility and gastro-intestinal disturbances. The blood picture may be variable. A drop in white cell count (especially involving polynuclears) below 5000 to 5500 is usually considered a sign of incipient poisoning. Anemia and corresponding change in hemoglobin usually occur after toxic effects on white blood cells become manifest. Leucocytosis, eosinophilia and polycythemia are occasionally observed.

The urine may contain albumin, casts

and bile pigments.

In the proper placement of personnel, juvenile and pregnant workers and those suffering from chlorosis, tuberculosis, organic heart disease, hemorrhagic diathesis, and anemia should ordinarily be excluded from positions entailing a hazardous exposure.

Occupational examinations of exposed employees, including blood studies, should be made at intervals of approximately one month, gauging the frequency to severity of exposure. The ratio of inorganic to total sulfates should be determined, a reduction of which will indicate the existence of exposure to benzene. In case, upon repeated examination, the percentage of organic sulfate is 30 per cent or more, the concentration of benzene in the air of such operations should be determined and reduced by proper engineering methods.

Carbon monoxide poisoning may occur in a great number of industrial operations. The gas, CO, is formed by the incomplete combustion of organic materials. Its action on the body is related to its affinity for hemoglobin which is 300 times that of oxygen. When inhaled it forms carbon monoxide-hemoglobin, and thus causes anoxemia in proportion to the amount of carbon monoxide-hemoglobin in the circulation. Carbon monoxide poisoning is usually acute. Whether or not chronic carbon monoxide poisoning exists as an entity is controversial and seems largely dependent on the interpretation of the word "chronic." It appears that continued exposure to moderately toxic concentrations will result in disturbances of the circulatory and nervous system.

Blood saturation up to 15 per cent HbCO rarely produces symptoms, but when the blood saturation is from 15 to 20 per cent, tightness across the forehead, possibly slight headache and dilation of cutaneous blood vessels are observed. When the blood saturation is 30 to 40 per cent, the common symptoms are severe headache, weakness, dizziness, dimness of vision, nausea and vomiting, and collapse. Coma with intermittent convulsions, depressed heart action, and possibly death are symptoms occurring with HbCO concentrations of 60 to 70 percent. With exercise, latent symptoms often become manifest and existing symptoms are aggravated. On exposure to high concentrations, the victim may notice few, if any, symptoms yet he may without warning become unconscious and die without regaining consciousness.

The treatment of carbon monoxide poisoning should always be carried out by a qualified physician, although first aid must be given pending his arrival. In summarizing experience with the treatment of carbon monoxide poisoning, the following procedure, outlined by Sayers, is recommended.

1. The victim should be removed to fresh air as soon as possible.

2. If breathing has stopped, is weak and intermittent, or present in but occasional gasps, artificial respiration by the Shafer method should be given persistently until normal breathing is resumed or until after the heart has stopped.

3. Pure oxygen or a mixture of 5 per cent carbon dioxide and 95 per cent oxygen should be administered using an inhaler, beginning as soon as possible and continuing for at least 20 minutes in mild cases and as long as 3 hours, if necessary, in severe cases if the patient does not regain consciousness. The administration of oxygen or of the mixture of carbon dioxide and oxygen when given immediately will greatly lessen the number and severity of the symptoms from carbon monoxide poisoning and will decrease the possibility of serious after-effects.

4. Circulation should be aided by rubbing the extremities of the patient and keeping the body warm with blankets, hot water bottles, hot bricks, or other devices, care being taken that these objects have been wrapped or do not come in contact with the body and cause burns.

5. The patient should be kept at rest, lying down to avoid any strain on the heart. Later he should be treated as a convalescent and should be given plenty of time to rest and recuperate. Exercise was at one time recommended; however, the procedure is hazardous, as the patient quite often loses consciousness, and in some cases death occurs.

Certain occupational diseases have been briefly described here. The industrial physician should have as thorough a knowledge of occupational diseases with which he may come in contact as possible. He should know fully the laws applying to occupational diseases in the state in which he is practicing. Many of the questions arising in connection with compensation are medical in nature and demand medical solutions.

Handicapped workers have been and are rapidly being taken into industry. Most present compensation laws have ap-

parent deficiencies. Certainly amended legislation is indicated in many instances as well as enlightened administration of the present laws, particularly as related to waivers and second-injury provisions.

The industrial physician should in every case secure accurate and complete occupational histories as well as such other history as may be pertinent to accurate diagnosis. He should thoroughly perform physical examination. He should see to it that reexamination and periodical examinations are performed as routine measures. The physician has a major role to play not only in the treatment but in the control and prevention of disease in industry.

ELONGATED STYLOID PROCESS

Case Report

ARTHUR L. JUERS, M. D.
Louisville

An elongated styloid process may be the cause of obscure throat symptoms simulating in some respects glossopharyngeal neuralgia. The pain is intermittent in character and usually centers in the tonsillar region, radiating to the corresponding ear. Frequently it radiates also down into the neck and up into the temporal and occipital areas. In the cases reported some have had tonsillectomy and others have not. Those who have had tonsillectomy sometimes complain that one side of the throat never has seemed to have healed.

Diagnosis is dependent on evaluation of the symptoms noted and finding the long styloid process by digital palpation of the tonsillar area. Usually pressure over the process will reproduce the symptoms. X-ray examination may be of value in verifying the diagnosis in some cases, especially if it is not readily palpated. In true glossopharyngeal neuralgia the pain is more paroxysmal in character and can be quickly relieved by anesthetizing the posterior lingual area. Though styloid process elongation is usually bilateral, symptoms are unilateral in the majority of cases.

The average normal styloid process is usually between 2.5 and 3 cm. in length. Those which may produce symptoms vary from 4 to 7 cm. One anatomical rarity has been reported in which there was complete ossification from the base of the skull to the hyoid bone. Since not all elongated processes produce symptoms there must be an additional factor of trauma or infection on one side which did not involve the asymptomatic side. Previous tonsillectomy is not always a factor inasmuch as Loeser reported a case in which the tonsils were present and removal of the process through an external approach without removing the tonsils completely relieved the symptoms. However, scar tissue formation after tonsillectomy undoubtedly plays a part in causing symptoms in some.

The treatment of the condition consists of surgical removal of the process. This can be accomplished either through an internal approach through the tonsillar fossa if the process is very prominent under the mucosa or an external incision may be used.

Fritz reported seeing 43 cases at the Duke Hospital over a period of nearly three years. Eleven of these were operated on and relieved, sixteen were symptomatic and unoperated and the other sixteen were asymptomatic and were discovered through routine tonsil palpation.

CASE REPORT: The patient is a 35 year old woman who first consulted me on September 9, 1942 because of recurrent pharyngitis and in addition almost constant pain in the left side of the throat, the base of the tongue and in the left ear region. This had been present for over a year. A tonsillectomy and adenoidectomy had been done at the age of 9. She had had a number of attacks of hives and angioneurotic edema. Skin tests for allergy had been done and were negative. She had been examined elsewhere for the trouble in her throat but no specific recommendation had been made. She apparently had been considered to be more or less of a neurotic.

My first impression was that her symptoms were perhaps out of proportion to her physical findings. However, examination revealed a definite basis for her throat complaint. On examination the nose was negative except for a moderate septal deviation. The sinuses were clear. The tonsils had been removed but there was a small recurrence of follicles in the left fossa. The anterior pillars on both sides were very prominent and digital palpation revealed a styloid process to be the basis of this prominence. Pressure over the left process increased the pain of which she complained. Pressure over the right process produced no discomfort. On Sep-

Read before the Jefferson County Medical Society, Louisville, December 20, 1943.

tember 22 with the patient under general anesthesia the lymphoid follicles were removed in the left tonsillar fossa, the styloid process was uncovered through an incision in the pharyngeal muscles and about an inch of it was removed. Sulfanilamide was placed in the incision. No sutures were used. The patient had a normal convalescence. When seen a month later she was completely relieved of her symptoms. A year later she was still symptom free. She stated that her general feeling of nervousness had diminished considerably since the relief of the pain in her throat.

DISCUSSION

Oscar Bloch, Jr.: Arriving a little late, I did not hear about the anatomical relationships. What originates from the styloid process? Does removing it ever cause any disability?

Robertson O. Joplin: Why did you use sulfanilamide?

Arthur L. Juers, (in closing): The styloid, stylopharyngeus and the styloglossus muscles are attached to the styloid process. We loosen the periosteum from the process and take off the elongated process by means of a rongeur. We leave the periosteum and there is no disturbance of attachments of these structures.

The sulfanilamide was placed in the wound because there was an opening in the tissues of the neck from the pharynx and a possible source of deep neck infection. I thought sulfanilamide would be of help in preventing cellulitis or deep neck infection. She had no temperature elevation after the operation and there was apparently no infection there.

IN MEMORIAM

DR. CARL WEIDNER, SR.
1857 — 1943

Dr. Carl Weidner, Sr., whose passing occurred in Louisville on December 15th, was the first physician in Kentucky to employ the microscope as an accessory in medical research. Throughout his professional career, which was wholly spent in Louisville, he not only advocated but practiced scientific medicine and worked diligently to improve methods of physical and laboratory diagnoses.

A native of Germany and the son of a cabinet maker, Dr. Weidner was born in 1857 in a small town in the province of Hesse-Kassel, where he obtained his elementary education. Even during his school days he manifested a keen interest in botany and chemistry and was wont to spend his odd hours in the woods with botanical equipment or in the town pharmacy, imbibing what knowledge he could of drugs and their actions.

At the conclusion of his school days, he obtained permanent employment in his home town apothecary shop. After a short apprenticeship, however, he yielded to the lure of "Opportunities in America" and emigrated to this country, settling in Detroit where he soon found employment in a retail drug store. A few years later, after graduating in pharmacy, his enthusiasm for the acquisition of medical knowledge influenced him to move to Louisville, which had medical schools among the best in the country which graduated large classes of doctors annually.

Here again, the young pharmacist, ever harboring the hope of an eventual career in the medical profession, found employment in a drug store. His employer, it so happened, was the father of your writer, then a boy of twelve years. This marked the beginning of a fast friendship between the boy and his young friend which endured throughout the years. This friendship influenced the boy to study medicine.

Aided by inherent thrift and zeal, the drug clerk, serving part time in the store and attending summer school in medicine, graduated in 1881, from the old Kentucky School of Medicine as first in a large class. After graduation, Dr. Weidner visited his family in Germany and while there took a course of instruction in the use of the microscope. Returning to Louisville he opened an office for the practice of general medicine, but his time was chiefly devoted to teaching "Microscopy" in the medical department of his Alma Mater. In those days, many doctors from America were treking to the medical centers of Europe to learn something of the then pioneer work in pathology and bacteriology being done in foreign clinics. Additional impetus to this influx to Berlin was furnished by Robert Koch's isolation in 1885, of the tubercle bacillus and his subsequent discovery of Tuberculin. Among the many to yield to this urge was Dr. Weidner, who, along with his friend, the late Dr. Louis Frank, journeyed to Berlin in 1891 and enrolled in the Bacteriological Institute for several months of study under the supervision of Prof. Koch.

Upon his return to Louisville, Dr. Weidner was honored by the faculty of the Kentucky School of Medicine with promotion to a full professorship in Bacteriology and Physical Diagnosis. Some fifteen years ago he discontinued instruction in the medical school in order to devote his entire time to a practice which had grown to large proportions, his services being in particular demand as a diagnostician and consultant.

Dr. Weidner was a member of the American Medical Association, the Kentucky State Medical Association and the Jefferson County Medical Society.

ADOLPH O. PFINGST

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NEXT ANNUAL MEETING LOUISVILLE 1944

COUNTY SOCIETY REPORTS

Bracken-Pendleton: The Bracken-Pendleton Medical Society held its regular meeting on the 17th of December, 1943 in Falmouth. Six members were present, three from each county.

New officers were elected for 1944 as follows: President O. W. Brown; Vice President, J. M. Stevenson; Secretary-Treasurer, W. A. McKenney.

The Society unanimously voted to pay the dues of its members who are serving with the Armed Forces, Wm. M. Townsend of Falmouth and C. A. Marquardt of Augusta.

W. A. McKenney, Secretary.

Daviess: The annual meeting of the Daviess County Medical Society was held recently in Owensboro, at which time the following officers were elected: President, G. W. Disbrow; Vice President, Wm. L. Woolfolk; Secretary-Treasurer, Frank J. Condon; Delegates, W. L. Tyler and A. L. Kincheloe; Alternate, R. W. Connor; Board of Censors: W. B. Negley, J. D. Stewart and R. W. Connor.

Frank J. Condon, Secretary

Grant: The annual meeting of the Grant County Medical Society was held in Williamstown, at which time the following officers were elected: J. J. Marshall, President; C. M. Eckler, Vice President; Wallace Byrd, Secretary-Treasurer; J. J. Marshall, Delegate; R. E Kinsey, Alternate.

Wallace Byrd, Secretary.

Harlan: The Harlan County Medical Society met on December 18, 1943, for its regular meeting and the following were elected as officers: President, D. M. Blanton, Harlan; Vice President, J. W. Nolan, Harlan; Secretary, W. R. Parks, Harlan; Delegates, Clark Bailey, Harlan; W. E. Riley, Harlan.

The society is very active in the opposition of Senate Bill 1161. During the early part of December the county society invited V. E. Simpson to attend a joint meeting of the Kiwanis and Lions Club. This meeting was very well attended and very well represented.

W. R. Parks, Secretary.

Hopkins: The Hopkins County Medical Society met for transaction of business on January 13, 1944, at 7 P. M. at the hospital.

Minutes of the last meeting were read and approved.

A card of thanks was received from Mrs. L. B. Robinson and family for the flowers sent by the Society during her recent bereavement.

The secretary reported a balance of $44.86 in the bank. Attention of the members was

called to the fact that dues for 1944 are now payable.

Mr. Eades, representing the Commercial Casualty Insurance Co., gave a short discussion of sick and accident insurance, as approved by the Council of the State Society.

The secretary reported that a new laboratory technician has been secured by the hospital and will begin work January 17.

The following officers were elected for 1944: C. B. Johnson, President; I. J. Townes, Vice-President; Wm. H. Garnier, Secretary-Treasurer; Delegate, F. P. Strother; Alternate, W. L. Morse.

A program in observance of National Social Hygiene Day is being arranged for the next meeting.

Members present were: Drs. Strother, Morse, Johnson, Morton, Garnier and Townes.

W. H. Garnier, Secretary.

Hopkins: The annual meeting of the Hopkins County Medical Society was held in Madisonville, at which time the following officers were elected: President, C. B. Johnson; Vice President, I. J. Townes; Secretary-Treasurer, W. H. Garnier; Delegate, F. P. Strother.

W. H. Garnier, Secretary

Knox County: The annual meeting of the Knox County Medical Society was held in Barbourville, at which time the following officers were elected: President, B. P. Jones; Vice President, R. B. Fulks; Secretary-Treasurer, T. R. Davies; Delegate, J. E. Parker.

T. R. Davies, Secretary

Lyon: The annual meeting of the Lyon County Medical Society was held in Eddyville, at which time the following officers were elected: President, T. L. Phillips; Vice-President, C. P. Moseley; Treasurer, H. H. Woodson; Secretary, H. H. Woodson; Delegate, D. J. Travis.

H. H. Woodson, Secretary

Muhlenberg County: The annual meeting of the Muhlenberg County Medical Society was held in Greenville, at which time the following officers were elected: President, Claude Wilson; Vice President, J. H. Harralson; Secretary-Treasurer, E. L. Gates; Delegate, J. H. Harralson; Alternate, G. L. Simpson; Board of Censors: E. L. Gates, C. G. Crowder and J. H. Harralson.

E. L. Gates, Secretary

Nelson: The annual meeting of the Nelson County Medical Society was held in Bardstown, at which time the following officers were elected: W. Keith Crume, President; Henry S. Harned, Vice President; W. Keith Crume, Secretary-Treasurer; W. Keith Crume, Delegate; Board of Censors: E. T. McMahan, Fairfield; E. D. Mudd, New Haven; A. D. Steely, Bardstown.

W. Keith Crume, Secretary

Perry County: The annual meeting of the Perry County Medical Society was held in Hazard, at which time the following officers were elected: President, Z. M. Abshear; Vice President, Charles Dana Synder; Secretary-Treasurer, J. P. Boggs; Delegate, A. W. Adkins; Alternate, H. W. Gingles; Board of Censors: C. S. Jackson, H. W. Gingles and C. D. Snyder.

J. P. Boggs, Secretary

Rowan: The annual meeting of the Rowan County Medical Society was held in Morehead, at which time the following officers were elected: President, T. A. E. Evans; Secretary, I. M. Garred; Delegate, T. A. E. Evans and I. M. Garred.

I. M. Garred, Secretary

Union-Medico-Dental: The Union-Medico-Dental Society regular annual meeting was held in Morganfield January 4, 1944. Following the banquet the minutes of the last meeting were read and approved. A motion made and seconded that Miss Tucker be paid $5.00 for clerical work during 1943. The Treasurer's report was read and approved.

The following officers were duly elected for the ensuing year: President, C. B. Graves; Vice President, D. L. Vaughn; Secretary-Treasurer and Delegate, Bruce Underwood; Alternate, D. L. Vaughn.

Rudy Ruark and Mr. A. L. Bailey were invited to become members. D. L. Vaughn invited the society to be his guest for the next regular meeting. C. B. Graves discussed the possibility of a district meeting in May. Dues were collected for 1944 and it was urged that all doctors pay their dues and the dentists, druggists and funeral directors be invited again to be members. Following an interesting round-table discussion the meeting adjourned.

The following were present: C. B. Carr, J. W. Conway, H. B. Stewart, Bruce Underwood, Rudy Ruark, D. L. Vaughn, D. M. Sloan, C. B. Graves, Mr. A. L. Bailey.

Bruce Underwood, Secretary

NEWS ITEMS

Captain Irvin Abell, Jr., Louisville, has returned from his duties in Iran, later reporting to Billings General Hospital, Fort Benjamin Harrison, Indiana, and has been assigned to Nichols General Hospital, Louisville.

Lieut. Col. J. Duffy Hancock has returned from duty in the Canal Zone and spent his leave in Louisville.

Lieut. Commander Thos. V. Gudex has returned from the South Pacific and spent his leave at home before going to U. S. Naval Hospital, Memphis, Tennessee.

Lieut. A. A. Shaper, U. S. N., who recently returned from duty in the South Pacific, spent a few days in Louisville.

Captain George J. Petro is with the 74th Station Hospital somewhere in North Africa.

Captain Meyer M. Harrison visited Louisville during January.

Captain Horace H. Seay is on duty in the South Pacific Area.

Major Kerwin A. Fischer is stationed at the Billings General Hospital, Fort Benjamin Harrison, Indiana.

The new President of the Deaconess Hospital staff, Louisville, is Dr. O. H. Kelsall, elected to succeed Dr. W. H. Allen. Others named were: Vice-President, Dr. A. M. Leigh, and Secretary-Treasurer, Dr. J. Kenneth Hutcherson.

James Boyd Mason, London, died December 2, 1943, age 69 of chronic myocarditis. He was graduated from the Medical Department, University of Louisville, 1894. He did graduate work at Chicago Clinical School. He was a member of the Board of Examiners for Radiologic Technicians for Kentucky; past Vice-President of the Kentucky Medical Society; member of the Radiological Society of North America; served during the first World War with commission of Major; commissioned Major in the Medical Corps of Kentucky National Guard; made State Surgeon for Kentucky; member of the local Board of Examining Surgeons for Pensions; examining physician for the local draft board; President of The National Bank of London.

The Warren County Health Department has just issued a four page tabloid edition of its work for the year and much of the material is the writing of a layman and presented in a form that can be easily understood by the man in the street. It is gotten out as a special edition of the Park City Daily News, Bowling Green. This is to be distributed throughout the newspaper's circulation areas and it is estimated it will be read by 30,000 people.

Dr. Mitchell B. Denham, Maysville physician and surgeon, was advised of his appointment as a first lieutenant in the U. S. Army Medical Corps and directed to report for duty December 16. He is the fourth Maysville physician to enter the Medical Corps.

M. M. Hall, Campbellsville, is a physician in charge of a German Prison Camp in America.

W. P. Steenkamp, Member of Parliment representing Calvinia Constituency, South Africa, a graduate of the University of Louisville School of Medicine, and a member of the Kentucky State Medical Association before he left for his native country, is the author of a very splendid book, "Is the South-West African Herero Commiting Race Suicide." The Herero is a proud nation-conscious Bantu race associated with the Hottentot and the Mountain, Stone or Sand-Damara. This book has been donated to the library of the State Department of Health and those physicians interested in race problems will find this a source of valuable information.

C. C. Risk, M. D., and W. T. Buckner, M. D., Shelbyville, were guests of the Jefferson County Medical Society at its annual banquet at the Pendennis Club, Louisville.

A total of 5,042 wives of service men in Kentucky, 1,037 of them residents in the Louisville area, have received maternity and infant care under the Federal program inaugurated last May, according to statistics obtained from Dr. Alice Chenoweth, State Administrator of the State Department of Health.

Applications are approved at the rate of 500 to 550 a month, she added, with 530 since January 1. Applicants' husbands must be in the fourth to the seventh grades of the Army, Navy, Marine Corps or Coast Guard.

Scores of Louisville doctors are co-operating in the service, Health Director Leavell said. In 374 cases, 2,831 pre-natal visits to doctors were recorded.

BOOK REVIEWS

KAISER WAKES THE DOCTORS: By Paul de Kruif, author of Our Medicine Men, Microbe Hunters, Hunger Fighter and others. Published by Harcourt, Brace and Company, 383 Madison Ave., New York 17.

This is the story of Henry J. Kaiser's Medical plan which is an active achievement for a hundred thousand men in the Kaiser industries. It

gives the story of modern hospitals built in isolated construction sites and in over crowded boom towns and of the battles with bankers, medical societies and the disbelief of labor unions. This book is an autograph copy sent with a personal letter to the late Editor, Dr. McCormack.

NASCENT ENDOCRINE THERAPY: By John Franklin Ritter, Maquoketa, Iowa. Published by the Caxton Printers Ltd., Caldwell, Idaho.

The preface contains a short biography of the author and the story of his investigations and research in endocrine therapy. Members of the profession are invited to visit his clinic and judge for themselves the efficacy of his treatment. Those who are interested in this type of therapy may find some new kind of treatment for the ten million sufferers from hypertension, hypotension and peptic ulcers.

BIOCHEMISTRY OF MALIGNANT TUMORS: By Kurt Stern, M. D., Formerly Research Associate of University of Vienna, New York, and Robert Willheim, M. D., Professor, University of Phillipines, Manila. Reference Press, Brooklyn, N. Y. Price $12.00.

This volume embraces the relationship of cancer to chemistry in the broadest meaning of both words based on a collection of the literature as complete as possible. For the solution of the cancer mystery biochemistry and experimental biology have been called upon, and in the book all details contributed by these subjects have been studied and given in detail by the authors.

URINE AND URINALYSIS: By Louis Gershenfeld, P.D., Ph.M., D.Sc. Professor of Bacteriology and Hygiene and Director of the Bacteriological and Clinical Chemistry Laboratories at the Philadelphia College of Pharmacy and Science. Second edition, thoroughly revised, published 1943. 12mo, 304 pages, illustrated with 42 engravings. Cloth $3.25, net. Lea and Febiger, Washington Square, Philadelphia, Pa.

This useful work appeals to a wide field. It offers an up to date monograph on urinalysis to graduates in pharmacy, chemistry, bacteriology and allied professions, the nursing profession, technicians and those many practitioners in medicine interested in the performance of these tests. The larger works on biochemistry, physiological chemistry and clinical laboratory methods as a rule have considered this subject with a conciseness that detracts from its practical value to the clinical worker.

This edition presents an abundance of new material and reflects the advances which have accumulated since the first appearance of this work. It has been thoroughly revised to cover the recently-introduced procedures and it is based on the author's personal performance of over 40,000 urinalyses. Here will be found not only the refined methods and techniques used in the laboratory but those which will be found useful in the physician's office without the use of elaborate equipment and material. A careful urinalysis will not only reveal pathological conditions in the urinary tract but may aid in the diagnosis of disease affecting other parts of the body.

This volume considers this subject in all of its aspects. Here is material for both the beginner and the trained worker and the data presented, in its conciseness, will answer every purpose of those for whom the work is intended. The short-comings of many of the tests are clearly indicated for the diagnotician and data are supplied that will enable him to place the proper evaluation on the results obtained from them. On the other hand, the laboratory worker, whose task is to report and not to attempt to interpret laboratory findings, will obtain a rich fund of knowledge of practical value..

ESSENTIALS OF DERMATOLOGY: By Norman Tobias, M. D., Senior Instructor in Dermatology, St. Louis University; Assistant Dermatologist, Firmin Desloge and St. Mary's Hospitals; Visiting Dermatologist, St. Louis City Sanitarium and Isolation Hospital; Fellow American Academy of Dermatology and Syphilology; Diplomate, American Board of Dermatology and Syphilology. Second edition. J. B. Lippincott Company, Publishers, East Washington Square, Philadelphia. Price $4.75.

For greater clarity many paragraphs have been completely rewritten, others widely elaborated. Close attention has been given to vitamin and sulfonamide therapy, physiotherapy, pathology of various dermatoses, newer ointment bases. An added attraction is the new photographs, principally from the author's collection.

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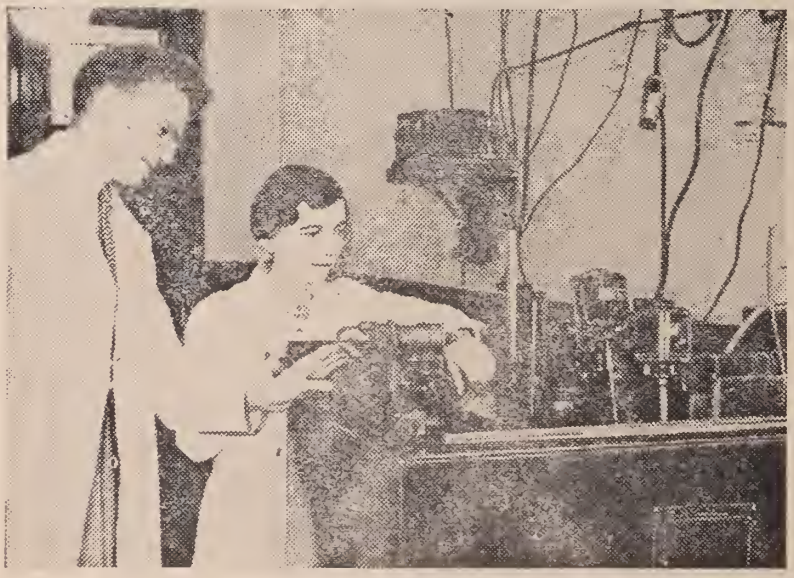
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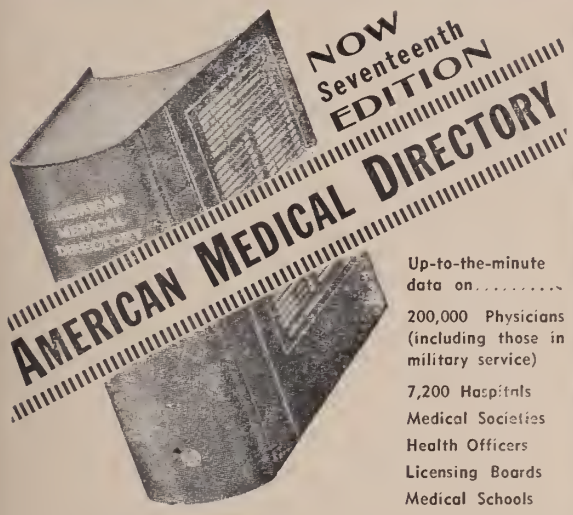
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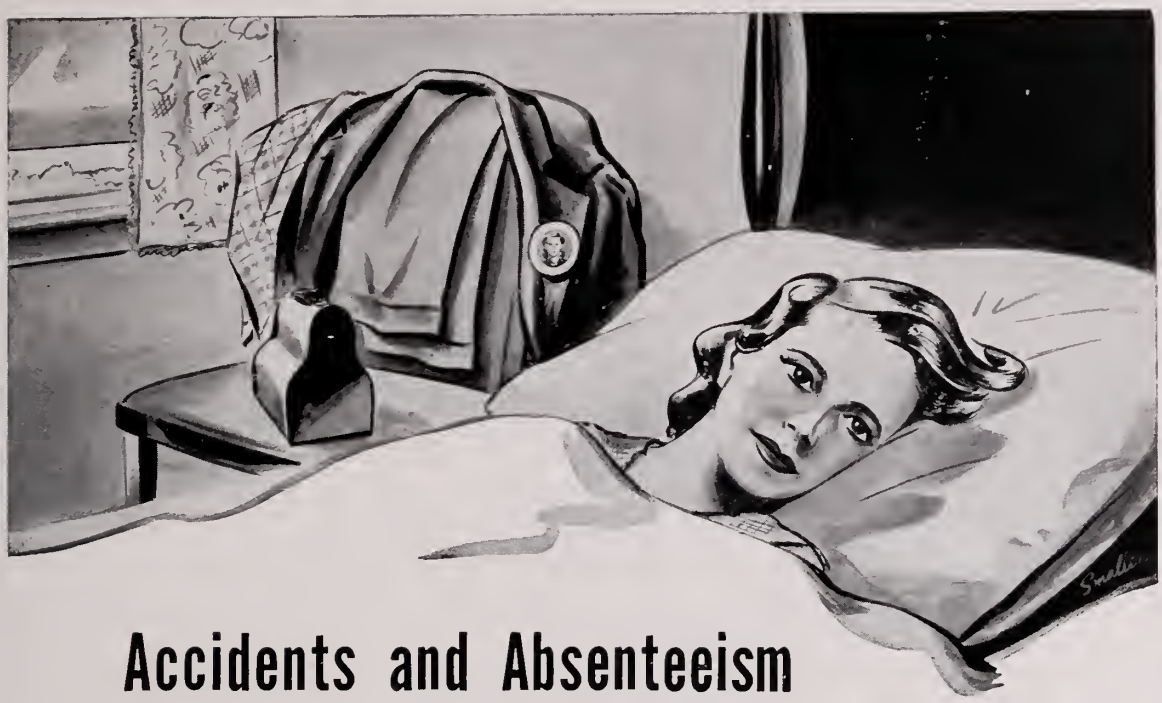
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*R. H. Follis, D. Jackson, M. M. Eliot, and E. A. Park: Prevalence of rickets in children between two and fourteen years of age, Am. J. Dis. Child. 66:1-11, July 1943.

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Rochester, Minnesota

Gastric and Duodenal Ulcer, Surgical Management 80
Arthur W. Allen
Boston, Mass.

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Editorial and Business Offices, 519 Tenth Street — Subscription Price, $5.00; Single Copy, 50 cents
Entered as second-class matter, Oct. 22, 1916, at the Postoffice at Bowling Green, Ky. Acceptance for mailing at special rates postage provided for in Section 1103, act of October 6, 1917, authorized May 25, 1920.

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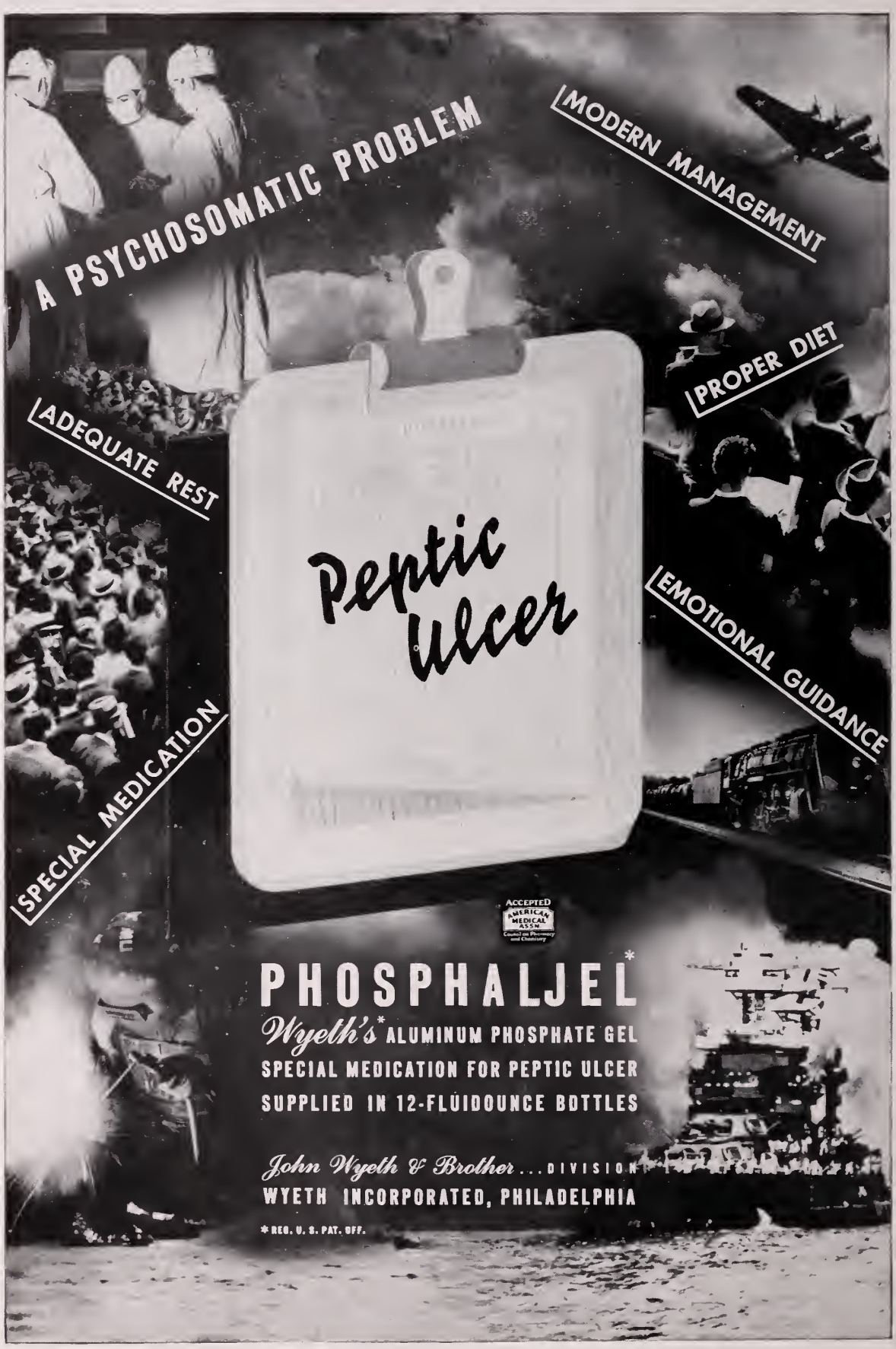
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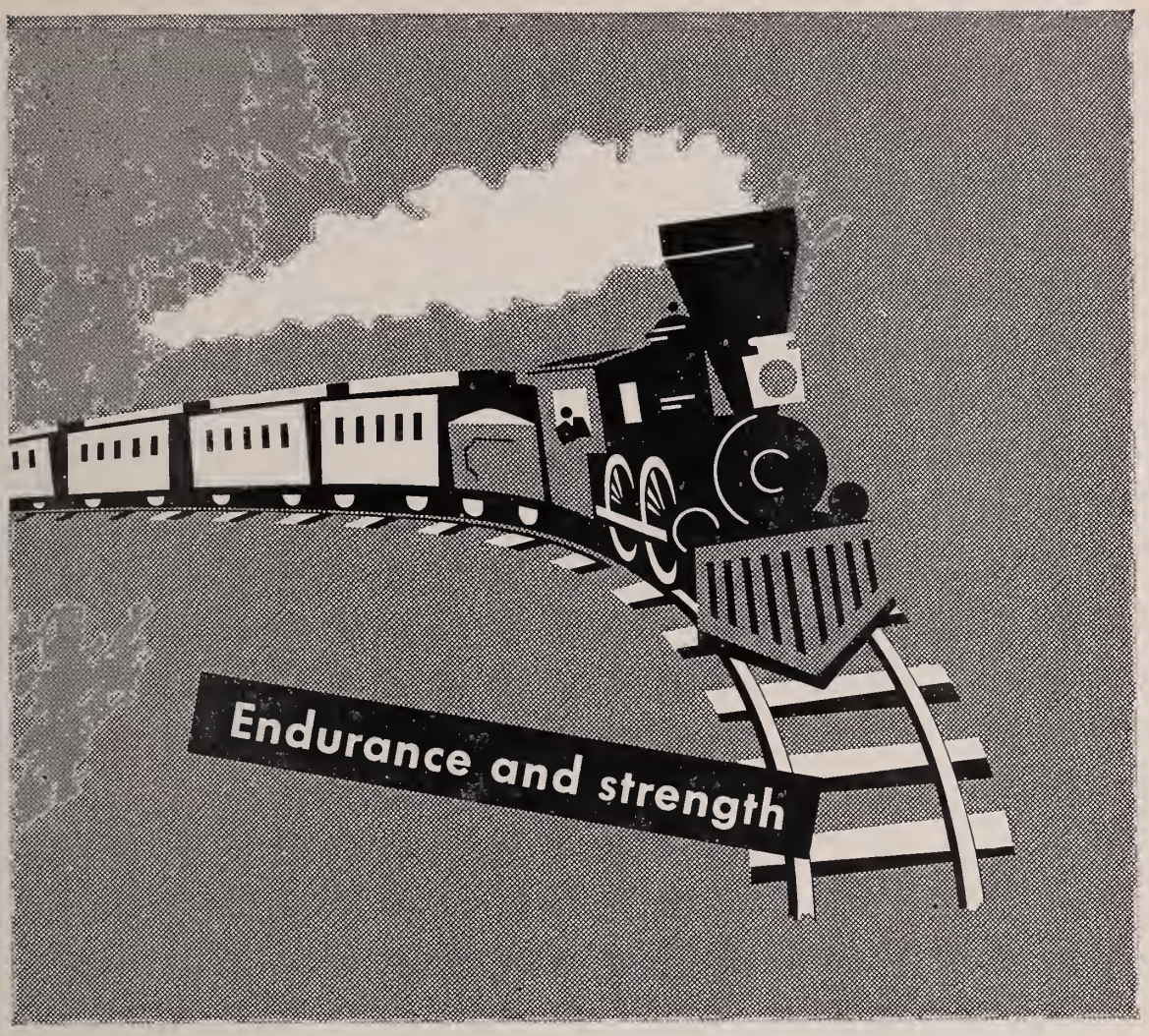
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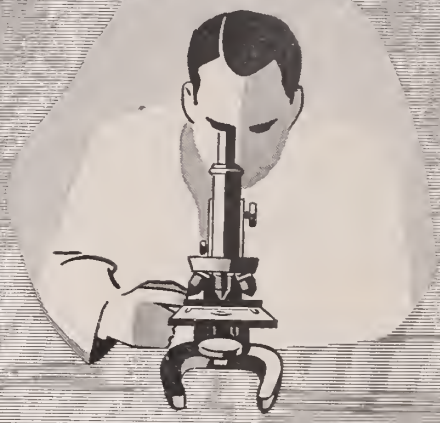
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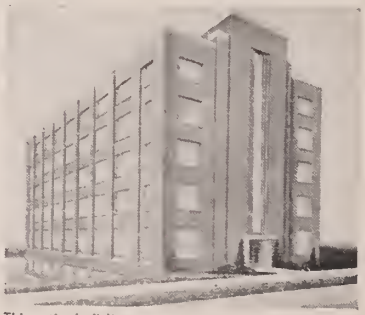
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REFERENCES: [1]FLEMING, A.: Brit. J. Exper. Path. 10: 226 (June) 1929.
[2]CHAIN, E.; FLOREY, H. W.; GARDNER, A. D.; JENNINGS, M. A.; ORR-EWING, J., and SANDERS, A. G.: Lancet 2: 226 (Aug. 24) 1940.

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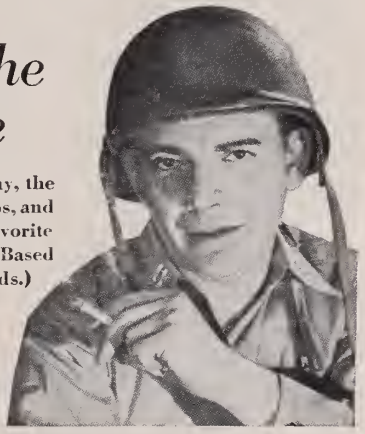
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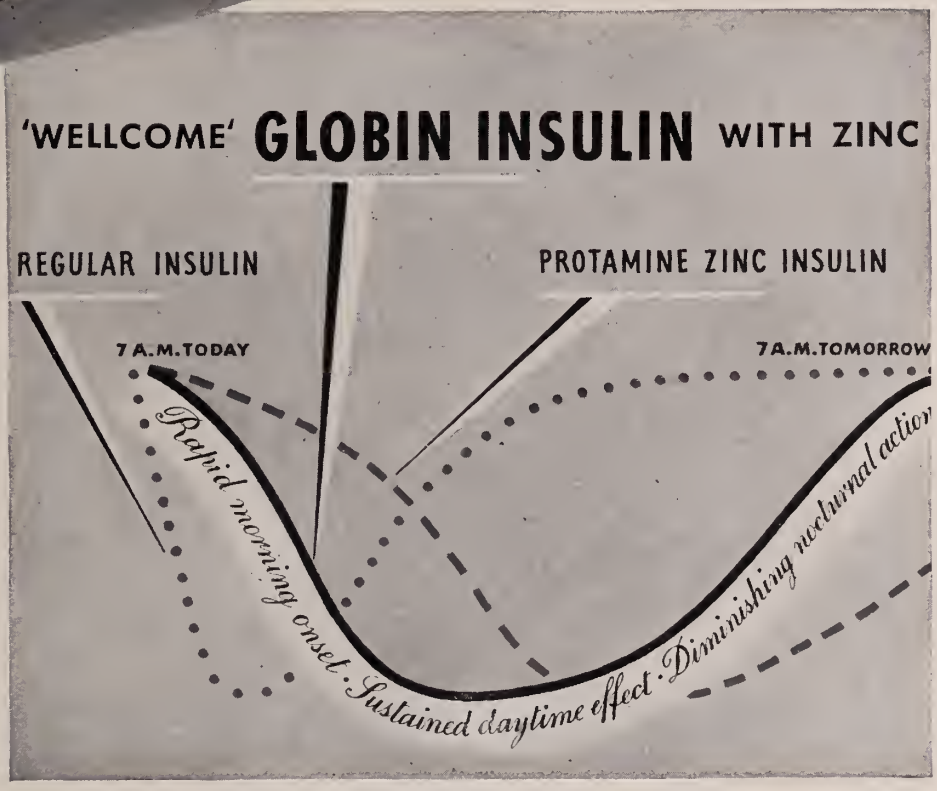


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Adair	W. Todd Jefferies	Columbia	March 1
Allen	A. O. Miller	Scottsville	March 22
Anderson	J. B. Lyen	Lawrenceburg	March 6
Ballard	F. H. Russell	Wickliffe	
Barren	C. R. Markwood	Glasgow	Masch 15
Bath	H. S. Gilmore	Owingsville	March 13
Bell	Edward S. Wilson	Pineville	March 10
Boone	R. E. Ryle	Walton	March 15
Bourbon	George M. Jewell	Paris	March 16
Boyd	Price Sewell, Jr.	Ashland	March 7
Boyle	P. C. Sanders	Danville	March 21
Bracken-Pendleton	W. A. McKenney	Falmouth	March 23
Breathitt	M. E. Hoge	Jackson	March 21
Breckinridge	J. E. Kincheloe	Hardinsburg	
Bullitt	George B. Hill	Mt. Washington	
Butler	D. G. Miller, Jr.	Morgantown	March 1
Caldwell	W. L. Cash	Princeton	March 7
Calloway	J. A. Outland	Murray	
Campbell-Kenton	Robert L. Biltz	Newport	Marcn 2
Carlisle	E. E. Smith	Bardwell	March 7
Carroll	H. Carl Boylen	Carrollton	
Carter	Don E. Wilder	Grayson	March 14
Casey	Wm. J. Sweeney	Liberty	March 23
Christian	H. B. Stone	Hopkinsville	March 21
Clark	W. Carl Grant	Winchester	March 17
Clay	L. H. Wagers	Manchester	
Clinton	S. F. Stephenson	Albany	March 18
Crittenden	C. G. Moreland	Marion	March 13
Cumberland	W. F. Owsley	Burkesville	March 1
Daviess	Frank J. Condon	Owensboro	March 14 & 28
Estill	Virginia Wallace	Irvine	March 8
Fayette	Charles D. Cawood	Lexington	March 14
Fleming	Roy Orsburn	Flemingsburg	March 8
Floyd	Robert Sirkle	Weeksbury	March 29
Franklin	E. K. Martin	Frankfort	March 2
Fulton	John G. Samuels	Hickman	March 8
Gallatin	J. M. Stallard	Sparta	March 16
Garrard	J. E. Edwards	Lancaster	March 16
Grant	Wallace Byrd	Williamstown	March 15
Graves	H. H. Hunt	Mayfield	March 7
Grayson	E. B. Deweese	Caneyville	
Green	S. J. Simmons	Greensburg	March 6
Greenup	Virgil Skaggs	Russell	March 10
Hancock	F. M. Griffin	Hawesville	March 6
Hardin	D. E. McClure	Elizabethtown	March 9
Harlan	W. R. Parks	Harlan	March 18
Harrison	W. B. Moore	Cynthiana	March 6
Hart	Vinson Corrao	Munfordville	March 7
Henderson	Walter L. O'Nan	Henderson	March 13 & 27
Henry	Owen Carroli	New Castle	March 9
Hickman	H. E. Titsworth	Clinton	March 2
Hopkins	Wm. H. Garnier	Madisonville	March 9
Jefferson	Herman Mahaffey	Louisville	March 6 & 20
Jessamine	J. A. VanArsdall	Nicholasville	March 23
Johnson	Paul B. Hall, Act. Sec.	Paintsville	March 27
Knox	T. R. Davies	Barbourville	March 16
Laurel	Oscar D. Brock	London	March 8
Lawrence	L. S. Hayes	Louisa	March 20
Lee	A. B. Hoskins	Beattyville	March 11
Letcher	Bert C. Bach	Whitesburg	March 28
Lewis	Elwood Esham	Vanceburg	March 20
Lincoln	Lewis J. Jones	Hustonville	March 17
Livingston	T. L. Radcliffe	Smithland	
Logan	E. M. Thompson	Russellville	March 1
Lyon	H. H. Woodson	Eddyville	March 7
McCracken	Leon Higdon	Paducah	March 22
McCreary	R. M. Smith	Stearns	March 6
McLean	F. L. Johnson	Livermore	March 9
Madison	Scott McGuire, Jr.	Berea	March 16
Magoffin	Lloyd M. Hall	Salyersville	
Marion	Nelson D. Widmer	Lebanon	March 28
Marshall	S. L. Henson	Benton	March 15

COUNTY	SECRETARY	RESIDENCE	DATE
Mason	C. W. Christine	Maysville	March 8
Menifee	E. T. Riley	Frenchburg	
Mercer	J. Tom Price	Harrodsburg	March 14
Metcalfe	E. S. Dunham	Edmonton	March 7
Monroe	Geo. E. Bushong	Tompkinsville	
Montgomery	D. H. Bush	Mt. Sterling	March 14
Muhlenberg	E. L. Gates	Greenville	March 14
Nelson	Keith Crume	Bardstown	March 15
Nicholas	T. P. Scott	Carlisle	March 20
Ohio	Oscar Allen	McHenry	March 1
Owen	K. S. McBee	Owenton	March 2
Owsley	W. H. Gibson	Booneville	March 6
Perry	J. P. Boggs	Hazard	March 13
Pike	S. B. Casebolt	Pikeville	March 2
Powell	I. W. Johnson	Stanton	March 6
Pulaski	Robert G. Richardson	Somerset	March 9
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Rockcastle	Robert G. Webb	Livingston	March 3
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Scott	H. V. Johnson	Georgetown	March 2
Shelby	C. C. Risk	Shelbyville	March 16
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Spencer	M. H. Skaggs	Taylorsville	
Taylor	L. S. Hall	Campbellsville	March 9
Todd	B. E. Boone, Jr.	Elkton	March 1
Trigg	Elias Futrell	Cadiz	
Union	E. Bruce Underwood	Morganfield	March 7
Warren-Edmonson	John H. Blackburn	Bowling Green	March 8
Washington	J. H. Hopper	Willisburg	March 15
Wayne	Frank L. Duncan	Monticello	
Webster	C. M. Smith	Dixon	March 31
Whitley	C. A. Moss	Williamsburg	March 2
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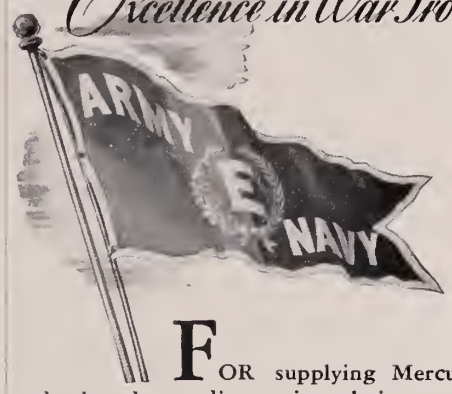
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ut so far I have learned of no other e suggestion which provides the neces- fety valve which such an arrangement would give. It would be tragic if a lot ll business concerns were wrecked and orkers thrown into idleness because of nability to cut through the red tape ed in getting their claims settled.

RESPONSIBILITIES OF CONTRACTORS

le making these statements with re- o action by the Federal authorities, I ize, also, that business concerns which war contracts have a responsibility on part to facilitate speedy settlement of ated war contracts. They have the re- bility for preparing their claims ac- y and speedily and presenting them per form. Some progress has been toward getting a recognition of the at industry must play in this respect, rrently more and more experience of ort is now being gained. The con- g services of the Government, I know, a very helpful attitude toward this sit- , and the local office of W. P. B. has shed a regional advisory service for war faced with problems resulting from termination. That is a very helpful nent.

ation to make possible the prompt nt of terminated war contracts is now. It will be unsafe to wait until s a deluge of contract terminations to through legislation on short notice. roblem is too complicated to be dealt fectively in that way.

ATERIALS FOR CIVILIAN PRODUCTION

ddition to making provision for the ent of terminated war contracts, there the task of facilitating the flow of als for civilian production as soon as materials can be spared from war pu- I hope that we shall not have unem- ent here in Massachusetts because d materials, which are physically in ex- e in the United States, are unavailable by manufacturers as a result of leg- or administrative restrictions. The legislation vesting the priority power President, which power of the Presi- delegated to the Chairman of the War on Board, is probably adequate to the flow of materials, but it may be ry for the Congress to make sure that ministration of the priority power by ar Production Board is directed effec- toward the speedy and smooth resump- f civilian production. The War Pro- n Board should be expected to elim- s limitation orders, its conservation and its allocation systems just as s the needs of the war program per-

use of their effects on plans for re- yment, I foresee that these problems tting canceled contracts and securing pplies of raw materials for civilian pro- n will presently be matters of wide- concern here in Massachusetts.

ummarize, my specific recommenda- re that legislation should be enacted r the following points:

EMENT OF TERMINATED WAR CONTRACTS

terminated contracts should be set- egotiation by the contracting agen- the Government, and the negotiated nt should be final in the absence or misrepresentation.

mpt partial payments amounting to large percentage of the claim should d to each contractor upon submittal fied statement of the claim, subject, , to a penalty for perjury.

al settlement committees should be red to authorize partial payments delay of over 30 days occurs on the the Government agency.

4. Contracting agencies should be required to give prompt clearance of claims on work in process. There should be clear-cut procedures for authorizing the removal of Government-owned inventories and machines, with storage at Government expense, in order that civilian production may be started.

5. The dilemma of the subcontractors must be resolved. At the present time the Government exercises the right of approving all payments in settlement of subcontracts but does not assume any responsibility to the subcontractor, with the result that the subcontractor in many cases cannot secure action by either the prime contractor or the contracting agency. I suggest that the local settlement committees proposed above should be empowered to approve settlement of subcontracts if a delay occurs in approval by the contracting agency.

B. DECONTROL OF MATERIALS

1. As soon as war conditions permit, the rules for the release of scarce raw materials should be revised, with a view to facilitating the rapid resumption of civilian production.

A Magnificent Job

EXTENSION OF REMARKS
OF
HON. LOUIS LUDLOW
OF INDIANA
IN THE HOUSE OF REPRESENTATIVES

Tuesday, January 11, 1944

Mr. LUDLOW. Mr. Speaker, Indianapolis and Indiana are very proud of the great pharmaceutical house of Eli Lilly & Co., which has processed its millionth blood donation without a cent of profit. This record is in keeping with the fine, generous spirit which this firm always has manifested in the service of our country and which long ago brought to it the recognition of an Army-Navy E award. Commenting on the company's contribution to the blood campaign, which means so much in saving the lives of our precious boys, the Indianapolis News says editorially:

LILLY'S CONTRIBUTION

In the midst of charges that some concerns are making an unholy profit from war contracts it is heartening to learn that the Indianapolis laboratories of Eli Lilly & Co. have processed 1,000,000 blood donations entirely on a nonprofit basis.

In addition to performing this service at cost, the expense involved has been decreased constantly through the introduction of more efficient methods.

There certainly could have been nothing unethical if the Indianapolis pharmaceutical house had sought a minimum profit for the work it has been doing.

Donations of blood at Atlanta, Chicago, St. Louis, Detroit, Cincinnati, Louisville, Columbus and Indianapolis have been converted into live-saving plasma at the Lilly plant, involving the installation of new equipment and the employment of much additional skilled personnel.

The patriotic Americans who donated this blood, however, got nothing for their contributions and the Lilly Co. determined that its connection wiht the effort to strengthen the wounded on every fighting front should be entirely shorn of private gain. From beginning to end, it has been and is—a magnificent job.

The Gates Must Not Be Closed

EXTENSION OF REMARKS
OF
HON. SAMUEL DICKSTEIN
OF NEW YORK
IN THE HOUSE OF REPRESENTAT

Tuesday, January 11, 1944

Mr. DICKSTEIN. Mr. Speaker, leave to extend my remarks in the ORD, I include the following editorial the Daily Mirror of January 4, 194

THE GATES MUST NOT BE CLOSE

When Congress reconvenes on Janu it should take up the Gillette-Taft-Bal Rogers resolution.

This resolution calls for the format a Presidential commission to create m ery, in conjunction with the Unite tions, to rescue the millions of Jew are now being systematically exterm hy the Nazis and their Quislings.

When the Presidential commission g work, one of the first things it shoul to seek the abrogation of the Cham "White Paper" of May 1939.

At present, Palestine is being admin hy Great Britain in conformity with t icy embodied in the "White Paper," tue of which Jewish immigration int tine is now limited and is to be pr stopped after March 31, 1944. The to be reduced to a permanent min 33 percent in the country and the and to Jews is to be practically pro

A DIRECT REPUDIATION

This is a direct repudiation on En part of the League of Nations Manda the Balfour Declaration incorporated mandate of 1917.

According to this declaration, Palest to become a national Jewish home un protectorate of England.

In 1939, after the Jews had created ern civilization in what was practic Arabian desert, England turned h on her solemn promise of 1917.

This perfidity of Britain toward t was denounced hy no one more vig than by Winston Churchill in Parlian the debate on the "White Paper" when he said:

MR. CHURCHILL'S REGRET

"As one intimately and responsib cerned in the earlier stages of our P policy, I could not stand by and see engagements into which Britain has before the world set aside for reason ministrative convenience or for the quiet life. I should feel personally rassed in the most acute manner I myself by silence or inaction to wha regard as an act of repudiation.

"I regret very much that the pledg Balfour Declaration, endorsed as it h hy successive governments, and the tions under which we obtained the n have both been violated by the Gover proposal.

"I select one point upon which plainly a breach and repudiation of four Declaration—the provision tha immigration can be stopped in 5 ye by the decision of an Arab majority, a plain breach of a solemn obligation

As the Palestine Mandate was ord the League of Nations, it cannot b gated even by Great Britain herself the consent of the League.

A SOLEMN OBLIGATION

But the League did not give its cons the 1939 abrogation.



James H. Pritchett M. D.

PRESIDENT KENTUCKY STATE MEDICAL ASSOCIATION 1944

KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

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Van A. Stilley, M. D.

Again the medical profession of Kentucky is called on to mourn the loss by death of a President of the State Medical Association, Dr. Van A. Stilley, who was elected by the House of Delegates of the State Medical Association at its last annual meeting to serve the term of Dr. C. C. Turner, who died while President Elect.

In the passing of Dr. Stilley, the Association has lost a member who, in his 54 years of active professional service, devoted himself unselfishly to the interests of organized medicine and gave of himself unstintingly, in private practice and public health, to promotion of the welfare of the people of Kentucky.

Always exemplifying the traditional qualities of the "Doctor of the Old School," Dr. Stilley was ever ready to applaud the younger men of medicine in their ambition to attain the highest achievement in modern scientific practice. Hosts of such young men will remember him for his kindly encouragement and friendly interest.

In the field of public health, Dr. Stilley endeared himself to all his coworkers, not only by providing leadership but by helping others envision the opportunities for a career in this particular specialty of medicine. Never did he lose sight of his obligation to promote, as far as possible, programs for the improvement of public health. Few men in this field ever enjoyed the love and respect of those with whom they labor, as did Dr. Stilley.

Dr. Stilley was a Christian gentleman in the truest sense of the term. His own minister, on the occasion of his funeral, described him as "A Christian above everything else," adding that "He fulfilled the law of true greatness in the love of God and the love of neighbor as himself. . . . To him every man was his neighbor and the loving attention shown to others was as much a part of his life as breathing."

Few men have been more deserving of the encomium, "Well done thou good and faithful servant;" few men have left behind more precious memories to assuage the sorrow of family and friends.

A HAPPY CHOICE

The Council of the Kentucky State Medical Association, in unanimously electing Dr. James H. Pritchett, of Louisville, to fill out the unexpired term of the late President, Dr. Van A. Stilley, rendered a fine service to the organized profession of the State. No physician in Kentucky, probably, has labored more earnestly or energetically on behalf of his profession, both in his County Society and the State Association, than Dr. Pritchett. He has always jealously guarded the rights and prestige of doctors and, with a friendly manner and cheerful disposition, has so won the confidence and good will of the members of the State Association that it is reasonable to assume that the action of the Council will be universally applauded.

The Jefferson County Medical Society honored Dr. Pritchett in 1935, by electing him President. He has served actively on most of the County Society's important committees and has been delegate to the State Medical Association at several annual meetings. Dr. Pritchett was Orator in Medicine at the Annual Meeting of the State Association in 1935, Vice President of the Association in 1937 and Chairman of the Program Committee in 1941.

Dr. Pritchett has been Associate Clinical Professor in Pediatrics in the University of Louisville School of Medicine for many years and as a teacher has won the friendship of the many graduates of the University who attended his class lectures and observed his clinic demonstrations. He has been prominent in civic affairs, contributing both time and effort in association with other prominent civic leaders. He has always demonstrated devotion to his church and here again given of his splendid ability for leadership.

Those who know Dr. Pritchett intimately can give assurance that he will work diligently to further the program of organized medicine and make a splendid record as President of the Kentucky State Medical Association.

CURRENT COMMENT

The following commendatory letter has been received by the Secretary:

The more than three years of the Selective Service program in Kentucky has been marked by the fine cooperation of the physicians and dentists of the state, both as examining physicians for the local boards and members of the medical advisory boards. At a time when it was necessary for the doctors at home to carry the added burden left to them by their colleagues in the service there has been little faltering in the examination of Selective Service registrants. All have taken a justified pride in a task well done. The chief complaint has been that the required examination was so superficial that its value was limited.

The new method of examining registrants relieves the local board examiner of the greater part of the load shouldered in the past. This change was brought about by altered conditions and in no sense was a result of dissatisfaction with the fine work done by our doctors, both physicians and dentists.

May I take this opportunity to express to these men, through you, the deep appreciation that is felt by both National and State Headquarters for the patriotic and loyal service that has been rendered on the home front. A large portion of this appreciation belongs to those in the public health service, the county health officers, the late Dr. A. T. McCormack, and to you, his assistant and successor.

Sincerely yours,
FRANK D. RASH,
State Director

Members of the Kentucky Medical Association are invited to attend the annual Clinical Conference, March 14, 15, 16 and 17th at the Stevens Hotel, Chicago, under the auspices of the Chicago Medical Society.

Plans have been made for four intensive Postgraduate Days consisting of half-hour lecture and clinic periods each day with intermissions for luncheons and inspection of technical and scientific exhibits. Popular subjects will be covered by specialists in their respective fields.

A dinner will be held on Wednesday evening with a speaker of national reputation on a non-medical subject. For further information, write Chicago Medical Society, 30 N. Michigan Ave., Chicago, 2.

The American Urological Association offers an annual award "not to exceed $500" for an essay on the result of some clinical or laboratory research in Urology. The amount of the prize is based on the merits of the work presented and if the Committee on Scientific Research deem none of the offerings worthy, no award will be made.

Competitors shall be limited to residents in urology in recognized hospitals and to urologists who have been in such specific practice for not more than five years.

Essays must be in the hands of the Secretary, Dr. Thos. D. Moore, 899 Madison Ave., Memphis, Tenn., by March 15, 1944.

ORIGINAL ARTICLES

WE ARE NOT CONTENT

MAJ. GEN. DAVID N. W. GRANT
The Air Surgeon Headquarters AAF
Washington, D. C.

It is always a pleasure to come to Kentucky and enjoy your most excellent hospitality. Please accept my sincere appreciation for the opportunity to take part in your program this evening and for the chance to meet again with old friends.

The seventh day of certain months in recent history, seemingly have held a fatal fascination for our enemies, the Axis partners. March 7, 1936, was a big day for Hitler, for on this date he denounced the Locarno Treaty which had guaranteed the eastern frontiers of France and Belgium. He also ordered German troops into the zone twenty-five kilometers east of the Rhine, this area having been demilitarized by the Treaty of Versailles in 1919. Such actions, coupled with full rearmament, constituted a clear threat to France along whose borders the growing German army was stationed. Later, on May 7, 1939, Hitler announced a definite military alliance with Italy.

On Good Friday, the seventh of April, 1939, just a month before the announced alliance with Germany, Mussolini already having enlarged Italy's imperial properties by the conquest of Ethiopia, created a second opportunity for expansion. Il Duce declared the Albanian people were guilty of bad faith and of outrages against the Italians. Since "his patience was exhausted" as he put it, he must, therefore, act in defense of his honor and his injured people. Thus, Albania was added to the growing empire of Mussolini by a sudden sea and air attack launched on April 7, 1939.

Then came December 7, 1941, when Japan committed the most heinous act of all, war without warning, by attacking simultaneously at Pearl Harbor, in the Phillipines, and in other places, the tenth such action on the part of an Axis power. These and similarly atrocious plans threatened the general peace of the world and we, like Great Britain, Russia, and the Governments in Exile, were precipitated in an engagement for nothing less than survival.

Today, October 5th, 1943, marks the beginning of the 96th week of our active participation in the war. We have come a long way during this period, as you all know, but we are still not content with all we have done, a very commendable attitude indeed. We, all of us, plan to do more and more and more until the peace we seek is ours. Only then may we relax and again enjoy the benefits of democracy. I wish I could even venture a guess as to how long the war will last, it's a question uppermost in everyone's mind I am sure—but I don't, nor can anyone else at this time. Whatever the time, we have a job to do, and we'll do it, thoroughly and completely so that we, along with other peace loving nations the world over, may again conduct out international affairs in an orderly and gentlemanly fashion.

No, we are not content, and now I speak of the service with which I am connected. Man, for the first several thousand years of his existence, was essentially a three to fifteen-mile-an-hour individual. His activities were in two planes and he was limited to the surfaces of the earth and the sea. Within the span of one generation the tempo of his movements was increased to about fifty miles an hour. The succeeding generation, today's people, find themselves operating at much greater speeds and in three planes. They are no longer limited by the surfaces of the earth and sea; their speed of travel can be well in excess of four hundred miles an hour in the air. Perhaps the expression "three dimensional warfare" characterizes better than any other the tactics of World War II. Fluid war, a war of motion has displaced the static single dimensional type of military action as practiced in World War I.

Such a radical change obviously brought about new problems—serious ones that demanded immediate attention. Many of these problems were medical and since the usefulness of the machines of destruction is limited by the frailties of the human body and spirit, the Medical Service with the AAF soon discovered that a partnership between the engineer and physician had to come. We are told by physicists that the speed of aircraft as we know them today is limited by the speed of sound, which is approximately 760 miles per hour. We may see this speed exceeded, however, as new methods of propulsion are devised. Propeller blade tips, for instance, already approach or equal this speed.

The partnership between the engineer and the physician was a logical one and necessary in the design of machines that can be operated by man, and in the development of secondary devices and aids

Read before the Kentucky State Medical Association, Louisville, October 4, 5, 6, 1943.

to help men use the machines of war that industry and science can build. It would be superfluous to suggest that evolution per se could cope with the changes needed in man to meet the demands of machines. Possibly, through the tricks of mutation, an occasional superman might be propogated who could adapt himself to this new environment better than the average. However, now is not the time to wait for or to seek supermen. More practical methods were sought, and through selection, training and the use of mechanical, chemical and other adjuncts, the average individual from the city and the farm was adapted to the situation at hand. This is the role and the precept of aviation medicine.

We were not content with the old but sought the new. Such action became absolutely essential for at least two reasons. We had a war to prosecute in the most expeditious manner possible, and we had an obligation to discharge to our fighting men and their relatives. We wanted, in other words, to get the job done while preserving the life of every man participating in the conflict. Everything was designed toward these ends. The selection of personnel, in order to place individuals in the position for which they were best suited, became paramount. The modification and improvement of equipment of all kinds, the training procedures and every other element bearing on the war effort came in for due consideration. It was the type of decisive action our forces deserved to receive.

I would like to discuss with you very briefly a few of the specific problems with which we have been faced and our approach to their solution.

Take for example, the selection of flying and maintenance personnel, one of the greatest single tasks which confronted those of us charged with the responsibility of placing young men from the school, the farm, and the factory in a strange powerful machine in a strange environment.

We must decide, from the thousands of young Americans, who are arriving at the various AAF classification centers every day, who shall be the pilot, the bombardier, the navigator, the observer, and the gunner, and also who shall remain on the ground to service and maintain the equipment that the others are to fly. To make these decisions in the manner of the democracy for which these men are asked to fight, is almost a Herculean undertaking in itself. Every possible aid, medical, physical, psychological, and educational, has been summoned for the purpose of rendering an opinion of merit. The decisions made must be right and without reservation, for the demands of the times are pressing, and time itself is short.

The lad from Iowa may never have seen an airplane at close quarters before, and this one from Texas may never have ridden in one, but from experience we know that either individual may make just as efficient a combat pilot as his friend with 400 hours of flying time. Other attributes being equal, it would be an injustice to our effort as well as to the candidate not to give him an opportunity to prove his worth. The doctor, the psychologist, the educator, and the air man must and do cooperate to make the all-important decision which is to divert the prospective flyer into the air, the machine shop and the supply depot, or behind a work desk for a task without glamour. Mistakes in classification sometimes may be made and as a result heartaches occur, but better a hundred heartaches than an avoidable mistake.

Among the important requirements for the air man are the three sights: visual sight, foresight, and insight. The force of gravity usually precludes hindsight. The visual apparatus of the flier is called upon to operate at functional extremes; extremes which perhaps are not inherent to any other occupation. In normal flight, air men must constantly shift their gaze between the far horizon, their many instruments, and possibly the small print of a map, thus passing through the entire range of the visual focus. Each object must be registered, interpreted, and filed away in his consciousness to be discarded or called back at the will of an ever changing situation. His perspective is altered by altitude and distance. That which he has learned to recognize as a massive structure is now a Lilliputian blur. That which he has learned to perceive in terms of vertical walls contouring the streets of a city, is now a flat checkerboard of criss-cross shapes. Yet his interpretations must be the same.

His eyes must function equally well in the glare of the sun, and in the blackness of the night when he returns to his home base to level off and land at an airdrome that may be blacked out to avoid detection by the enemy.

Color vision has taken on a new significance. The fact that the man formerly selected a green tie when one of brown or blue would have been more appropriate has only aesthetic importance, the

selection of a wet green field for a landing when a dry brown one would have been better is of real and tangible significance. His occupation as an air man does not allow him to go back and try over again.

Foresight is the ability to project one's self into a future combination of circumstances and to break that situation down into its basic components. Although foresight is based upon knowledge and experience, the ability to synthesize these elements is inborn. To the air man, foresight means the projection of bits of maps, a series of regional weather reports, wind velocity, and fuel consumption charts into a composite flight plan which will aid him in fulfilling his mission. Symbols, words, charts, and slide rule data must be combined with past experience to mean icing conditions here, or unfavorable winds over there. Teletype transcriptions, verbal directions, shifting columns of smoke and the readings of the wing thermometer must be pieced together to secure a picture of either instrument weather, or just blue sky ahead. Certainly, it becomes all-important to procure the right man for the right job so that he can be in the right place and to do the right thing at the right time, but how can such a selection be made? It is only through use of an elaborate system of examinations ranging from the person's ability to solve simple situations (including the methods employed by him and the results obtained) through successively more difficult elimination tests. News concerning past experiences likewise is helpful. How did he solve the necessity of getting an education? What are his plans for the future? Does he look before he jumps or is it the other way around? All of his life, so far, he has used foresight to a varying degree. It is one of our tasks to make both a qualitative and a quantitative estimation of it.

The third member of the triad is insight or judgment. Again, one must examine that which is abstract in order to form a concrete conclusion. What is the man's ability to learn and what is his sense of value? Does he have what we so commonly call "horse sense"?

Selection in the time allotted by active participation in warfare is fraught with innumerable difficulties. Fortunately, our basic plans had been formulated for some time, and expansion and application are now producing results. We are proud of the accomplishments. The right people are being directed into the duties for which they are best fitted. A natural corollary is that the over-all task at hand will be done more quickly and efficiently. Likewise, the air man will stand a much better chance of returning from his missions because he knows what to do and how to do it.

But selection of personnel is only the beginning. During the training period of these individuals, the time element is ever important. This can be understood readily when it is considered that it takes from twelve to fifteen months to train combat crews for front line duty. It seemed wasteful to those of us charged with maintaining the health of these men, so difficult to replace, to have thousands of convalescent soldiers in our hospitals, reading detective and wild west stories, or looking at the ceiling, bored to distraction. For this reason, one year ago a convalescent training program was inaugurated in all AAF medical installations, its purpose being to re-condition sick soldiers physically by a planned and organized physical re-habilitation program, and to utilize heretofore wasted convalescence time by an educational program designed to disseminate knowledge that would make these men better soldiers. To date, some 18,000,000 man hours of physical and educational training have been given in the hospitals. The teaching rate is at the present time approximately 2,500,000 man hours per month.

The convalescents' training program is designed for the ordinary sick soldier in our hospitals. Its purpose is to send men back to duty in top physical condition and to increase their knowledge of military subjects. Physical re-conditioning is accomplished by a systematic and graduated series of physical exercises and calisthenics, given in their mildest form even to bed patients. A patient may be started on bed exercises two days after surgery, to prevent his muscles from becoming flabby. A pneumonia patient will begin deep breathing and chest exercises as soon as his temperature is normal. One popular and economical phase of this program has been the planning and tending of over 200 Victory Gardens by convalescent patients. Conditioning camps have been established under medical supervision in our basic training centers, with the attempt to condition gradually recently inducted under par soldiers who are unable to keep up with the regular training program, and ambulatory patients requiring long convalescence. These conditioning camps function in the same manner as a spring training camp for a baseball team. Many men who otherwise would have

been lost to the service have been salvaged by this method.

The educational phase of the convalescents' training program is organized to meet the needs of all types of AAF installations. In basic training centers men are given special courses designed to teach self-protection. Gas warfare, camouflage, booby traps, map reading, Judo, and first aid are subjects stressed. Our motto is "While you are in the hospital today, you may learn something that might save your life six months from now." Training, orientation, and morale films are used daily in the instructional program. Training aids, visual aids, and handicraft with model airplanes, tanks, and ships have been found to be of excellent educational and therapeutic value. Special classes for the review of mathematics and the teaching of illiterates have been organized. Soldiers in the latter category can be taught to write their name and serial number in 48 hours. This may seem to be a small thing on the surface, but it is a tremendous morale factor because, with this knowledge, the soldier need not disclose his ignorance to his fellow soldiers.

In the technical schools the program is modified to meet special needs. In the radio schools, for example, special code receiving sets and sending keys have been placed in the hospital wards so that men may continue to practice even while in bed. During certain periods of the day the wards are blacked out, and the men send and receive blinker code from bed to bed. Formerly, it was noted that men would lose their code speed after a week without practice. Now our patients are leaving the hospital with maintained and, in many cases, increased speed. In the hospital serving the flying fields and tactical units, geography, geopolitics, airplane identification, reptile-insect-pest control lectures and discussions on arctic and tropical medicine and sanitation are the subjects stressed. Medical officers have designed a series of "patient-doctor" talks directed toward giving the men a knowledge of the symptoms, cause, treatment, and prevention of various tropical diseases. This has been of tremendous help in orienting these soldiers in their new environment and allaying the fear that comes, naturally, when going into unfamiliar surroundings.

Phonographs and records for instruction in thirty languages and dialects, designed to teach a man a vocabulary of 150 words in seven hours of study, have been made available to all AAF hospitals, and the soldiers have shown great interest in this particular field. Special classes in aquatics, life-saving, and advanced first-aid are given in all installations, where practicable.

Patients about to be discharged from the Army on a Certificate of Disability Discharge are given an orientation lecture encompassing their relationship to the Army when they return to their homes. They are invited to attend lectures on first-aid, gas warfare, etc., in the hospital, so that upon their return to civilian life they may participate in the program of civilian defense. These men also are interviewed by the medical officer in charge of their case. They are told why they are being discharged from the Army; their disability is frankly discussed with them, and recommendations are given as to further medical treatment and the medical contacts that should be made after their return home.

Instructors in the program are obtained from among officers assigned to the post, station, or air field, and the medical departments of the station hospitals; in addition, convalescent patients with special training and experience are utilized to the fullest extent. Seventy-five per cent or more of the instructors used in the program are convalescent patients, men who have seen foreign service, or specialists in military or civilian subjects.

The results of our experience with convalescents' training have been most gratifying. Hospital re-admissions have been reduced because men are being sent back to duty in better physical condition. The period of convalescence in certain acute, infectious, and contagious diseases has been definitely shortened. One hospital reported a reduction from 18 to 11 days in patients with measles and a drop from 33 to 23 hospital days in convalescents with scarlet fever. A recent study of 350 cases of virus pneumonia, running two parallel groups, revealed that the non-supervised group averaged 45 days of hospitalization, with 30 per cent recurrence, while the group that was very carefully supervised and integrated into the physical re-conditioning program average 31 hospital days, with only a 3 per cent recurrence. The necessity for granting sick leaves has been abolished almost entirely. With travel conditions as they are, it was found that many soldiers going on convalescent leave became ill at home; now when they leave the hospital, they are im-

mediately ready to step into a full training schedule.

The educational phase of the training program has been enthusiastically received by the soldiers in AAF hospitals, and a wealth of general military knowledge has been disseminated throughout the entire Air Forces.

We have now reached the peak of training in this present world conflict, and each day sees larger numbers of soldiers in the theatres of operation. Military operations mean battle casualties, and the war-weary and wounded are now returning in ever increasing numbers. Convalescents' training needs must change to rehabilitation training. With this in mind, the AAF have established rehabilitation centers in strategic areas throughout the continental United States, where every facility will be utilized to bring about the mental and physical rehabilitation of the soldiers. Trained staffs of physicians, educators, physical therapists, physiotherapists, psychologists and psychiatrists, having shown their ability in their work with convalescents' training, have been used to staff these centers. Special broad courses that will enable a man to integrate from one type of job to another are being carried on in these centers, in addition to a selected, planned program of physical re-conditioning and re-education. Every known facility is being used to aid the physically and psychologically wounded soldiers to make a new place for themselves in military or civilian life. Trained psychiatrists, familiar with the psychology of flying personnel and the convalescent soldier, are being utilized for psychotherapy and for consultation service in re-adjustment problems. The Flight Surgeon has a paramount place in the rehabilitation center. For years, the flyer has been taught to look upon the Flight Surgeon as his family doctor and as a man to whom he can come with his personal as well as his medical problems. This has been of primary importance in the maintenance of the high morale of the flying crew and will be invaluable in their rehabilitation.

It is the policy of the AAF that every man shall be utilized to the fullest extent of his ability. Wherever possible, he shall be retained in the military service, but if discharge is a necessity, he is to be followed through and aided in establishing a productive place for himself in civilian life.

I know there are a number of you in this audience who have sons, husbands, brothers, or sisters in the services. Perhaps some of them are in foreign fields, subjected to the rigors of Army life in the face of enemy action. I, personally, have visited the English, African, Southwest and South Pacific theatres and have seen the conditions under which your loved ones are living, fighting, and being cared for. I wish to assure you now that every means is being used to make the job easier for them. The medical care they are receiving is unparalleled in military history. The American soldier fighting today is receiving better medical care in the Army than he would receive at home. The casualty rates are mute evidence of this fact: World War I, 15 percent; this Global War, 1½ percent.

One of the great factors in this medical miracle has been Air Evacuation. In the present fluid-type of warfare, the zone of active combat often lies a comparatively great distance from a base of sufficient size to support adequate specialized medical or surgical care in properly equipped hospitals. Air evacuation, as practiced today, has accounted for the saving of many, many lives, for, within a matter of a few minutes to a few hours, sick and wounded men may be carried over long distances to points where proper definitive medical treatment may be instituted. It becomes clear that these persons then will receive the best attention possible to render. Likewise, it is a great morale factor for men to know that a safe, rapid means of transportation is at hand should they become ill or wounded. Since Pearl Harbor, we have transported in the neighborhood of one hundred thousand patients aboard AAF planes, both within and without the continental limits of the United States. In battle areas, these men have been removed to surroundings of peace and quiet, away from the theater of active operations, their medical treatment having been started enroute. The Air Evacuation officers, nurses, and enlisted men responsible for this splendid achievement have been and are being trained right here at Louisville. I trust these words may be of some consolation to those of you who have relatives in the battle zones.

"Tyranny, like Hell, is not easily conquered," but the Axis patent on injustice and blitzkrieg is approaching its expiration date. Our enemies shall be conquered, and never shall our government be one of "by some, for some," as the Axis would have it, but "by all, for all." Our debt to America, democracy and peace, is timeless but payable on demand. We must pay now. Let us, all of us, do our share.

BURNS

Claude S. Beck, Lt. Col., M. C.
Surgical Consultant
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I am honored to be on the program of the Kentucky State Medical Association. When I received this invitation I felt that I should have a method of treatment and a series of cases to justify a place on this program. As I got into the literature, however, and found so many methods of treatment and so many controversial topics, I felt satisfied to review the subject for you. I hope I can do this in an impartial manner.

I need scarcely point out the importance of this subject. In civilian life we have the individuals who are burned at home and at work. We all remember the Coconut Grove disaster.

The importance of this subject in this war is readily recognized when we consider the war as being fought on land, on sea and in the air. The war is propelled by gasoline. It is made destructive by fire power and explosives, by incendiary bombs and by fires extensive enough to cover a city; besides these there are such things as flame throwers and burns by phosphorus and by magnesium.

In view of such considerations as these we should like to have precise and accurate knowledge of the treatment of burns. Gurd and his associates recognize four consecutive periods in the development of our knowledge on burns. The first period preceded the introduction of tannic acid. The second period was the tannic acid period. The third was marked by the recognition of shock and its treatment by plasma and extends over the last decade. The fourth period began in 1940 with the introduction of sulfonamide therapy. Statistics from the Sick Children's Hospital of Toronto show improvements in death rate, morbidity, and functional results in each of these periods. It is reasonable to expect further improvement in treatment after the various observations from the different theaters of war can be analyzed and arranged in their places of proper importance. Almost every surgical journal contains articles on burns of recent publication. The Army Medical Bulletin of April 1942 contains the concensus of opinion on burns as expressed at that time by the committee on Surgery of the National Research Council. This publication recommended the use of tannic acid. On January 11, 1943, the War Department published a circular letter on burns and on September 11, 1943, just a few days ago, another circular letter on burns appeared. The last circular letter did not recommend the use of tannic acid. It is my task to analyze an extensive and somewhat conflicting literature. What I should like to do is to be able to select fundamental principles and separate these from the points of secondary importance. I should also like to present to you a program of action, so that if you were brought face to face with a catastrophe you would have something to go on.

Read before the Kentucky Medical Association, Louisville, October 4, 5, 6, 1943.

Fundamental Principles: There are three fundamental principles in the treatment of burns. These have been well recognized by Sumner Koch and by others. These are (1) the prevention of infection, (2) the prevention of shock by administration of plasma, and (3) early skin cover.

1. The Burned Area is a Wound: The burned area is to be regarded as a wound. The chances are that the wound is sterile at the moment of infliction, that the bacteria are killed by the heat. It immediately may become infected. Because the wound is superficial and on the surface, our reaction to it in the past has been superficial and casual. Infection in the wound has been one cause of death in individuals who have been burned. It has also been a factor in morbidity. It has been responsible for the loss of skin grafts and it has been a factor in production of deformity. There is no doubt but that infection is a factor in the production of the so-called toxic manifestations of burns. We have been slow in recognition of these facts. Why we did not recognize the burn as a wound and apply strict asepsis to the care of the wound is difficult to explain. Now we do recognize the importance of this matter. We should apply the same strict asepsis in its care as we do in the operating room with any other type of wound. This means that when definitive care is given to the burn, it should be done in a room that is clean and free of dust. In civilian work the definitive care is given in the operating room. This involves gloves, gown, cap, mask, sterile drapes, etc. All individuals coming into the room should wear masks and caps. After definitive care has been given the dressings are not

opened early and when the dressings are taken down the dressing is done in a clean room, free from dust. Personnel again wear gloves, mask and cap. It is preferable to do the dressing in an operating room if this is possible. Some of us, no doubt, are self-conscious in applying such precautions. We have not done this in the past and we may hesitate to change our habits now. May I remind you, however, that surgeons were slow to apply the principles of asepsis in general surgery and even now there is considerable variation in the degree and fool proof nature of asepsis in our operating rooms. We cannot be too careful in this matter and we are only doing the proper thing for our patient by observing strict aseptic technique. The War Department recommends prophylaxis against tetanus in all patients with second and third degree burns.

It is interesting to take cultures of the burned skin when definitive treatment is applied. It has been shown that the wound usually becomes infected early after the burn has been sustained. The wound becomes infected from the clothes, blankets and hands that come in contact with the burned area. The attendants should not breathe upon the wound and should not talk at close range to the wound without the protection of a mask. For this reason the clothes are cut away without touching the burn and the wound is covered by a sterile towel as soon as possible. This is done as early as possible, sometimes before the patient is transported for definitive care.

II. The second fundamental principle concerns the prevention of shock by the administration of plasma. We will hear about this subject this morning from Dr. Stead and Dr. Kracke.

As soon as a burn is sustained plasma filters into tissues adjacent to the burn and exudes from the surface of the burn. The loss of plasma in a severe burn is considerable. The blood becomes concentrated in red cells. The circulating blood volume is reduced. The intake and output of the heart is reduced. Circulation becomes sluggish. In severe burns the picture of circulatory shock can develop rapidly. Blood pressure falls. Death may occur. Most deaths in any series of burns occur within the first 36 hours after the burn was sustained. These deaths are due to shock which in turn is due to loss of plasma. The early administration of plasma given intravenously prevents the development of shock. It is well recognized that emphasis belongs upon prevention of shock rather than the treatment after shock has appeared. To prevent the development of shock in patients with severe burns plasma is given as early as possible. This becomes an emergency measure and may take precedence over the local treatment of the burn. The War Department directs that 500 cc of plasma be given immediately to each patient with a severe burn. As many as 12 units of plasma may be necessary in the first 24 hours after the burn was sustained. If available, concentrated normal human serum albumin in appropriate amounts may be used. Albumin is very effective in maintaining blood pressure and blood volume. Transfusions of whole blood are employed early only in those cases in whom there has been loss of blood. The use of whole blood is obvious in such cases but whole blood cannot take the place of plasma or human serum albumin to maintain blood volume and to counteract shock in severe burns. Later on in the course of the burn severe anemia may develop. In such cases transfusions of whole blood should be given to bring the blood picture back to normal.

III. The third fundamental principle in the treatment of burns is to establish a skin cover to the burned area. In first and second degree burns where the full thickness of the skin has not been destroyed regeneration of skin takes place very nicely provided the wound is not grossly infected. Epithelium regenerates from the deep layer of skin. It also regenerates from the deep crypts of skin that escaped destruction in third degree burns. These islands of skin may give rise to thin sheets of epithelium that may spread out and coalesce with other islands of epithelium and in this way the wound may become covered. It should be emphasized that right here is where the medical personnel can easily deviate from the proper procedure. One can wait and wait coaxing epithelium to grow in from the margins and for the islands to coalesce. After a few weeks the rate of growth becomes slow or stops entirely. From this point on recovery comes to a standstill. If the patient is left with granulating areas for a long time he tends to become anemic and a less suitable recipient for his own grafts. Granulation tissue later undergoes scar tissue formation. This adds to contracture and deformity. Skin grafting should be done as early as possible. It does no harm to cover up

small probable islands of regenerating epidermis. One should try to have the wound covered with grafts at the end of two weeks. Every surgeon should be able to graft skin. Or let us put it this way that every hospital in every community should have a surgeon who can graft skin. It is not difficult.

Skin grafting involves first the proper base to take the graft. It must be free of sloughing tissue. Destroyed skin must be cut away. The second week is required to determine what skin has been destroyed. The sooner it is removed from the wound the better. The wound should also be relatively free of infection. It is sometimes advisable to take cultures of the wound. If hemolytic streptococci are present, sulfonamide therapy should be instituted until the cultures are negative. If a wound is found to be grossly infected, it should be well irrigated with sterile, warm saline and gently swabbed with pledgets of cotton. Years ago we would use Dakin compresses and this method of treatment is recommended.

The grafts are of several varieties, pinch grafts, split thickness grafts cut by a dermatome and full thickness grafts. I shall not discuss the indications for each of these. I do want to emphasize the fact that there comes a time (and Gurd refers to this as the principle of timing) two or three weeks after the burn has been sustained when skin cover should be given. To delay is to tie up the patient in the hospital and to impair the final results.

So far we have discussed fundamentals in the care of a burn, avoidance of infection, administration of plasma to prevent shock and provision of a skin cover early and not late. We will now take up several topics of a controversial nature.

The first concerns the local treatment of the burn. The trend of opinion is toward the use of an ointment dressing on the wound. Gurd recommends a 5 percent sulfathiazole emulsion, claims that it possesses anesthetic properties, that it is bacteriostatic and that it assists in the early healing of the wound.

Montreal General Hospital Formula:

Sulfathiazole (finely powdered)	5%
Triethanolamine	2%
Distilled Water	24%
White beeswax	5%
Liquid paraffin	64%

The War Department recommends the use of fine meshed gauze impregnated in boric ointment or vaseline. These strips of gauze are laid upon the wound. The definitive treatment recommended in the army is as follows. Under aseptic conditions the wound is carefully observed as to extent and depth of the burn. Very often you cannot tell how deep the burn is at first. You can readily estimate the extent on the basis of the Berkow formula which gives 1 percent for one surface of one of the patient's hands, 6 percent for the head, 18 percent for arms, 18 percent for back, 20 percent for front of the trunk and 38 percent for legs. Pieces of dead skin are removed by forceps and culturred. If the wound is soiled and contains particles of dirt, these are gently washed away with sterile water or saline. Cotton pledgets and ordinary ivory soap are used. The wound is gently swabbed and bathed. It is not vigorously scrubbed with green soap. Cleansing of the skin is carried well beyond the burned area. All attendants wear caps and masks and this treatment is given in a place free from dust and infection. Small blisters are not opened because the fluid in small blisters is usually but not always sterile. Large blisters are opened. One would like to cut away the skin at this time if it is completely destroyed, but you cannot determine extent of destruction at this early period. Inhalation anesthesia is not used. Morphine is used. The wound is covered with ointment strips. On top of this is placed a layer of fluffs, absorbent napkins, gauze waste, cotton, or cellulose. This extends well over the wound. It is then snugly wrapped with an elastic bandage and a gentle even pressure is applied. As a rule it is not necessary nor is it advisable to change this dressing early. If the part is comfortable and if there are no signs of sepsis it need not be looked at for 10 days.

Is a pressure dressing necessary? It is thought by some that a pressure dressing prevents the loss of plasma into the tissues and therefore minimizes shock. Pressure can be applied to the face, neck and chest provided the pressure is well distributed. It can be applied to the extremities and is recommended.

What place has tannic acid and other escharotics in the local treatment of a burn? Much can be said in favor of tannic acid. I think it marks the first great advance in the treatment of burns. It reduced shock, it relieved pain, it simplified care and it saved lives. When Davidson introduced tannic acid he did so with the

belief that it fixed the burned tissues so that toxic products were not absorbed. It is now generally believed that the benefit derived from tannic acid was due to the reduction of plasma loss under the tanned skin rather than reduction of absorption of toxic substances. With the administration of plasma and the control or avoidance of infection the toxic theory of burns is on its way out. There are several considerations against the use of tannic acid. It is a necrotizing agent, it does fix living cells and it retards epithelization. It locks infection beneath the eschar. In third degree burns the eschar must be cut away, an operation which may not be so simple. There is also evidence to show that tannic acid may be the cause of necrosis of the liver in some patients. The Army circular letter of January 11, 1943 included tannic acid as an alternative method of treatment, but the recent circular letter of September 11, advised against its use.

Chemotherapy: There are two schools of thought on the subject of prophylactic chemotherapy. It is claimed by some that the severely burned cyanotic patient does not tolerate sulfadiazine very well, that it may be a factor in upsetting the stomach. The routine administration of sulfadiazine is recommended by the Army circulars for all moderately or severely burned patients. Sulfanilamide may be used. The initial dose is 4.0 grams. Great care should be exercised in using these drugs on burned patients because of the disturbance to water balance and possible damage to the kidneys. Maintenance dosage depends upon urinary output. Seven and one half grains every four hours are given until the output is made to total 1500 cc. per day when this dosage is doubled. In order to obtain this output fluid is given by mouth or by the intravenous route, normal sodium chloride solution or 5 per cent glucose being used.

Practical Program in Treatment: I should like to present a practical program for the treatment of one or of many patients who are severely burned. What should we do in the presence of a catastrophe? We should like to have a simple, effective program. The casualties have been picked up, taken from the water on ship board or carried from a burning building to a place where first aid can be given. The first thing to do is to give morphine to the severely burned individuals. If considerable morphine is required 50 grains are dissolved in 100 cc of sterile water and 1 cc of the solution is given. It may be given intravenously. Large doses of morphine are harmful to patients who are becoming asphyxiated from inhalation of flame, noxious gases and overheated air. We should observe the breathing. If the patient is choking immediate tracheotomy may save the patient. It is advisable to have tracheotomy sets available. Administration of plasma is next in order for the severely burned. It is hoped that an adequate supply of plasma is available. Every Army hospital has a supply of plasma. It is available in the forward dressing stations. The situation is such that plasma can be obtained almost anywhere the fighting forces happen to be. If a catastrophe should occur anywhere in this country the situation is such that plasma can be obtained in large quantities in a matter almost of minutes. This is one of the great developments in this war.

Plasma is given before shock develops, sometimes before anything is done for the burn locally. A needle is inserted into a vein of the ankle or arm. If a vein cannot be found one can use the femoral vein. A needle is inserted 1.5 inches below Poupart's ligament almost at right angles to a depth of about 2 inches. The vein is just medial to the artery. One or two units of plasma are given immediately to the individuals who are severely burned and time is not taken for hematocrit determinations. While this is being done the burns are observed. Clothes are cut away. Care is taken not to contaminate the wound. If definitive care of the wound cannot be carried out at the place where first aid is given the wound is covered by a sterile towel or dressing and the patient is transported to a hospital where facilities are available. The patient is properly protected with blankets.

When the patients are brought to the hospital they are placed in quiet rooms. Additional morphine is given. Breathing is an important item in the early period. Oxygen is given to those who are cyanotic. Definitive care of the wounds under aseptic precautions is carried out. The patients are quieted and comforted as much as possible. A cannula is placed in a vein for administration of plasma, glucose and physiological solution of sodium chloride. The amount of plasma needed by each patient is determined. A rule of thumb that has been used is to give 1000 cc of plasma in 24 hours to a patient with a burn equi-

valent to 10 per cent of the body surface. i. e., about 10 times the area of the patient's hand. A patient with a burn of 20 percent of the body surface should receive 2000 cc of plasma in 24 hours. If facilities for hematocrit determinations are available the following rule can be used for guidance in the amount of plasma needed. One hundred cc of plasma are given for each point in the hematocrit above 50 percent cells. As a rule the amount of other fluids given intravenously per 24 hour period should not exceed the total amount of plasma given in that period. However, a urinary output of 1500 cc per day is desirable and at the same time one must be guided in administration of 5 percent glucose and physiological sodium chloride solution not to waterlog the patient. Sulfadiazine or sulfanilamide is given and dosage is controlled on the basis of blood tests. Dosage is adjusted downward after a level of 10 milligrams are reached. The patient should be kept warm but should not be overheated. Fluid by mouth is given as soon as the stomach can take care of it.

Subsequent care of the burn has been discussed. Early skin grafting has been discussed. Anemia is treated by transfusions. Adequate intake of protein is required to promote healing of the wound and to preserve the nutritional condition of the patient. This is a point that should not be overlooked after the patient has gone through the critical period of the first few days.

The program as I have presented it has been tried and tested. It was found to be the most practical program in light of our present knowledge on burns.

In quoting the story of Representative Chester H. Gross about the Congressman who was asked to pay $1,000 by his obstetrician, Bascom N. Timmons, Washington correspondent for the Chicago Daily Sun, adds this note:

"Many congressmen already benefit from something akin to socialized medicine. A ranking naval medical officer, with a number of assistants from the Navy Medical Corps, is on full-time duty at the Capitol to treat ailing members and diagnose their ills—without charge. They can also get at-cost treatment at the huge new Naval Medical Center. Quite a lot of members consult no other physician, but the Navy does not go in for obstetrics." A. M. A. Bulletin.

SCIENTIFIC EXHIBIT AT THE SOUTHERN MEDICAL ASSOCIATION

Cincinnati, November 1943

Misch Casper, M. D.
Louisville

The Southern was probably the largest medical meeting of 1943, as the A. M. A held no meeting. The exhibits were the best the Southern has ever had; the meeting was well attended.

A new disease of the lung was exhibited, called Bagasse disease. It affects workers who break open bales of bagasse, which is the product remaining after the extraction of sugar from sugar cane. The disease has been shown to be organic, a pneumoconiosis. The X-ray makes the diagnosis. The film showed a peculiar ground glass miliary mottling of both lungs, most dense in the hylar areas. The prognosis is good.

Another new disease, or rather, an old disease with a new name is called Jeep disease. It is an inflamed pilonidal cyst. It exceeds syphilis and hernia as a cause of disability in the army. Two or three new operations were advanced for its cure, but for the little thing it appears, it carries big trouble for the surgeon, and the new operations are not much different from those that have been in use for a long time.

A new instrument for taking the venous blood pressure was exhibited, called Phlebomanometer. This is much simplified to what these instruments have been. Using one will always be a hospital procedure. The exhibitor emphasized the importance of direct venous pressure measurements, and gave the uses as follows: 1. proper evaluation and treatment of many clinical syndromes, such as: a. right ventricular failure; b. venous obstruction; c. shock; d. edema; e. disturbed water balance; 2. accurate diagnosis; 3, early and objective evaluation of treatments; 4. following course of clinical state; 5. prognosis; 6. clinical and physiological research. The needle of the instrument is inserted into a small vein on the back of the hand, and no blood loss is sustained in the procedure.

The subject of nutritional deficiency diseases was well illustrated in color, the symptoms being given of: 1. riboflavin deficiency; 2. scurvy; 3. niacin. Deficient states were shown in hands, tongue, and legs of all of the models, and black tongue in animals. Many of the experiments were carried out on rats with and without the vitamins, with pictures before and after rehabilitation.

Much work lately has been done on thrombosis of peripheral veins, and several exhibits were shown in regard to this condition. Early recognition from the history was stressed. There is usually a predisposition in the affected leg, the predisposing causes being: 1. injury and fixation of a lower extremity; 2. advanced age; 3. heart disease; 4. debility; 5. anemia; 6. malignant neoplasm; 7. obesity; 8. previous disease of veins; 9. severe infections; 10. pregnancy; 11. abdominal operations.

Thrombosis following fractures was illustrated, one being a complicated fracture of the patella, also the operation for ligating the common iliac vein. The ligation must be above diseased vein, especially if complicated by a pulmonary embolism. Thrombosis of the tibial vein, which tends to ascend to the iliac vein, may be cared for by thrombectomy. This is big surgery, but gives promising results.

An exhibit of health progress and American manpower was one to make doctors proud of their profession. The trends of mortality of diseases such as tuberculosis, pneumonia, contagious diseases, and cardiovascular-renal disease were shown to be continuously downward. Even in accidental injuries the mortality is being greatly lowered. This progress is also reflected in the greatly decreased mortality and morbidity of accidents and diseases in the army.

On the subject of nitrogen metabolism and amino acids in surgery many charts were shown depicting levels of proteins in various surgical states, both before and after operation. Methods of administering experimental amino-acid to patients intravenously were also given. The exhibitor listed various forms of hypoproteinemia and their pathological and physiological significance, as well as the many clinical manifestations. This work is new and should have close and comprehensive study. It will play a large part in the treatment of disease, both surgical and medical. Thus far we have depended on blood transfusion and lately, plasma to supply these nitrogen elements. The amino acids will be a great step forward, the chief trouble at the present time being their expense.

Another exhibit showing the use of procaine in almond oil for various kinds of pain was a very practical one. The demonstrator advocated 2% solution, showing the method and utensils for second lumbar epidural administration, also sacral and thoracic. The indications for medication in the second lumbar space are: sciatica, Raynaud's disease, thrombophlebitis, pain due to tumor of pelvic organs, chronic lumbosacral strain, Buerger's disease, thoracic intercostal neuritis (why not pleurisy?) Sacral injections are used for the lower extremity and coxalgia. Cervical injections are made in the seventh cervical interspace. The exhibitor also showed many X-ray films following lipiodol injection in the epidural space, showing the difficulty of these injections. There were charts illustrating the anatomy of this space in various areas and sections of the spine.

Tropical diseases came in for splendid illustrations in an exhibit of special interest to military doctors. Civilian physicians, too, should know these diseases for later care of returning soldiers. Also, as the world is getting closer together, we shall see more and more of tropical diseases. They were listed chiefly as: Cholera, Rickettsia, bacillary and amebic dysentery, malaria, and Filaria.

Devices for protection of the skin showed many ingenious methods utilized by physicians and nurses in all parts of the world to protect man from all his enemies: ticks, plague, chemical warfare, germs, and so on. Some of the methods are unique and no one could possibly pass this exhibit without taking away a practical point for his own use in his particular locality and his own line of work.

An exhibit by the army medical museum from the office of the Surgeon General was an education in itself. It brings one up to date in military surgery. Especially interesting were the latest models depicting all forms of injuries. These models are used to train the medical personnel in the armed forces. They would have a great value also in training medical students and nurses in civilian life; for instance, one was of an arm blown off just above the elbow, and others included all kinds of possible injuries that occur in the army. Those we have in civilian life from industrial and automobile accidents are not far different. The models constitute a new and valuable approach for teaching purposes.

The next collection contained a large number of cases of common dermatoses and contact dermatitis, shown by means of 540 plates of colored filmdex. Each film was true to color, properly indexed, and could be profitably studied for hour on hour. Practitioners of long experience have seen most of these skin lesions in their lifetime, and this review was refreshing to all, as well as practical and

enlightening. Such exhibits carry a post-graduate lesson of great value.

An exhibit on convalescent rehabilitation in army air force hospitals was truly revolutionizing. Bed patients are put through regular calisthenics very similar to a gymnasium program. Chair patients get set exercises, and of course convalescents able to walk have their part in the program. Many of the exercises are graduated play, thus upholding the spirits of the soldier, as well as maintaining his physical fitness at the same time.

A study of 100,000 chest films by photo-roentgen method constituted a good review for the roentgenologist and the chest specialist, as well as being an excellent study for us all. These films were in duplicate, that is, in life size and in miniature. There were many pictures on such subjects as malaria control and blast injuries, the latter receiving the blue ribbon as the best exhibit at the meeting.

The subject of diethylstilbestrol for uterine bleeding received much attention. The exhibitor said that the small uterus denotes failure to ovulate, also that diethylstilbestrol would stop most uterine bleeding immediately if injected into the anterior cervical wall, or in four to six hours if 5 to 25 mg. were given by mouth, and then continued in 5 to 10 mg. doses at 9:00 P. M. for thirty nights. To counteract nausea he gives phenobarbital and nembutal, and says nausea usually passes away in four to six days. It is impossible to give too much diethylstilbestrol, as it is not toxic, but often too little is given. Only two cases out of a hundred failed to stop bleeding with the use of this drug. Charts to illustrate various menstrual states, ovulation, and so on, were shown and the following diseases listed as amenable to treatment, dosage being advocated from 1/10 to 100 mg. according to the pathology, as follows: senile vaginitis, amenorrhea, hyperplasia of mucosa, painful endometriosis, dysmenorrhea, vulvovaginitis, menopause, menopausal migraine, ill feeling at menstrual time, functional uterine bleeding around menopause, and painful engorgement of breast (10 mg. for three to five nights), endometritis (10 mg. four times a day five to twenty days), toxemia of pregnancy (25 mg. four times a day), threatened abortion (5 mg. every fifteen minutes or until pain or bleeding stops), bleeding in incomplete abortion (often gives 100 mg., though uses 25 mg. for first dose), habitual abortion (10 to 25 mg.), non patent tubes (5 mg. thirty to sixty nights), as a test for pregnancy or tubal pregnancy (10 to 25 mg. by mouth; if no nausea in six hours, suspect pregnancy), pseudo pregnancy (1 mg. until uterine bleeding sets in), nausea of pregnancy (5 mg. per day increasing 5 mg. daily until nausea stops), for continued serosanguineous discharge after delivery (5 mg. per day for twenty days), operations during pregnancy (5 mg. per day for twenty days), operations during pregnancy (5 mg. before operation, 25 mg. as soon as operation is over and b. i. d.), acute salpingitis (5 mg. and bed rest to prevent tubo-ovarian abscess) (better give sulfa drug with it), cystic ovary (5 mg.), sterility (same dosage twenty to thirty days). The exhibitor said that bleeding from C. A. can be controlled by giving 5 to 25 mg. every hour until bleeding stops; then use radium,X-ray, or both. He said that stilbestrol will not make the patient ovulate, and it is uncertain in menstrual distress or dysmenorrhea.

One exhibit brought out that diseases transmitted from animals to man are surprisingly many. The animals were listed and include fowls, all domestic animals and a good many wild animals, especially rodents. The exhibit was so large that one could almost write a book about these diseases. It was a good review of accumulated knowledge over the centuries of the relation of animals to man from standpoint of disease.

The next exhibit was on Botulism, its causes and distribution over the country. It listed the articles of food that are the most common offenders, string beans being at the head of the list and canned corn second. Any home canned food may cause Botulism, which is due to insufficient cooking. Proper methods of preparing food as a prophylactic were given. The best treatment is an antitoxin for specific cases of Botulism.

Major David Woolfork Barrow, formerly of Lexington won the award for the best exhibit entitled Blast Injuries.

(Approved by District Councilor)

The practicing physicians of the nation are faced with a grave responsibility. It is their part to support and strengthen their medical organization, county, state and national; to support and assist in the work of the new Council on Medical Service and Public Relations; to become familiar with the principles expressed in the "platform" of their national organization; and to interpret those principles on any and all occasions to their patients, their friends and their legislators.—A. M. A. Bulletin.

SULFONAMIDE TREATMENT OF ACUTE BACTERIAL MENINGITIS

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Acute bacterial meningitis has always been a serious disease which has been attended by a high mortality rate. It is of interest that one type of this disease, namely meningococcic meningitis, while constantly present in sporadic form, has been characterized also by a tendency to occur during times of war in epidemics which have involved both civilian and military populations. It seems likely that other types of meningitis also might tend to occur sporadically more frequently during wars.

During the war of 1917-18, 5,839 cases of meningococcic meningitis occurred in the United States Army with a case mortality rate of 39 per cent, which was definitely less than the generally prevailing mortality rate at that time. Since the outbreak of the present world-wide conflict, there has been an increase in the incidence of meningococcic meningitis. In 1940, 12,500 cases of meningococcic meningitis occurred in England. In this country in 1942 and the first third of 1943, eighty cases of meningococcic meningitis were reported from Fort Bragg, North Carolina, and 101 cases from the U. S. Naval Hospital at San Diego. In addition, fifty-five cases were reported from Camp Edwards, Massachusetts, in the first third of 1943. The mortality rate in the three groups of cases drawn from the armed forces of this country varied between 0 and 4 per cent and is an admirable tribute to the medical care prevailing in the armed forces of this country. Other cases have of course occurred in our civilian and military population since our entry into the war.

Acute bacterial meningitis is caused by a variety of organisms, the most common of which are meningococci, pneumococci, hemolytic streptococci, Hemophilus influenzae and staphylococci. The tubercle bacillus is also a common causative organism but because it is unaffected by the sulfonamides it may be eliminated from this discussion. It is to be hoped, however, that at some future time promin or one of its derivatives may prove of some value in the treatment of tuberculous meningitis, although to date their use has been a failure in this condition.

Of the various types of meningitis, the type caused by the meningococcus, as previously mentioned, is the only one that has a marked tendency to occur at times in epidemics. While the early prevailing opinion was that this infection resulted from direct invasion of the meninges through the cribriform plate, most recent observations tend to confirm the opinion of Herrick that the infection develops secondary to establishment of meningococcemia resulting from nasopharyngeal infection. The role of carriers in production of this disease is not known definitely as yet and figures from different sources vary so that in some instances carrier rates have been shown to be higher in nonepidemic regions than they have been in regions where epidemics exist. Of interest, however, are some recent figures which indicate a carrier rate in troops in nonepidemic periods of from 2 to 10 per cent and a rate in healthy troops in epidemic periods of as much as 80 per cent. In hemolytic streptococcic and pneumococcic meningitis, infection frequently is secondary to a focus in the middle ear, mastoid or sinuses or to injury to the skull. Pneumococcic meningitis also frequently occurs as a complication of pneumonia. Meningitis produced by Hemophilus influenzae is chiefly a disease of infants and children, about 75 per cent of cases occurring among patients between the ages of two months and three years. In these circumstances it occurs as a primary infection, the result of a respiratory infection, and is usually associated with bacteremia. In older age groups this type of meningitis is usually secondary to a focus in the mastoid, middle ear or sinuses or results from trauma to the head. Staphylococcic meningitis occurs much less frequently than the previously cited forms of meningitis and is usually secondary to a focus of infection in bone such as osteomyelitis or in skin such as a furuncle or cellulitis. The meningitis may occur a considerable time after the original focus of infection has cleared up.

Some idea of the value of the sulfonamides in the treatment of acute bacterial meningitis may be gained from the approximate general statistics which I shall cite. Prior to use of serum or sulfonamides, meningococcic meningitis was attended by a mortality rate of from 40 to 90 per cent. When serum came into use, this figure decreased to from 17 to 30 per cent and with the use of sulfonamides it has decreased further to from 0 to 12 per cent. The mortality rate in pneumococcic meningitis was 99 to 100 per cent without

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treatment and with use of serum as well as sulfonamides it has decreased to from 35 to 80 per cent, results at the Mayo Clinic being in the vicinity of the last figure. Hemolytic streptococcic meningitis was attended by a mortality rate of about 97 per cent before sulfonamides came into use, but since their employment this figure has dropped to from 20 to 40 per cent. In influenzal meningitis use of serum and sulfonamides has caused a drop in mortality statistics to around 51 per cent from 98 to 100 per cent which existed prior to their use. In staphylococcic meningitis, the results, of course, are not as good as those obtained in the foregoing types of meningitis, but recoveries have been noted from the use of sulfonamides in this condition which previously was almost 100 per cent fatal.

Symptoms and Signs of Bacterial Meningitis: While space does not permit of any detailed discussion here of the diagnosis of acute bacterial meningitis, it is important to emphasize that the general symptoms and signs of infection exist in each case. This is especially important in epidemics of meningococcic meningitis as Daniels, Solomon and Jaquette, Jr., have shown because it is possible frequently to treat patients when they are in a phase of meningococcemia rather than in a stage of meningitis. Hemorrhagic conditions of the skin and mucous membranes occur in a large proportion of cases of meningococcic meningitis and also occur at times in cases of influenzal meningitis. Headache with or without nausea and vomiting has occurred in a large percentage of recently reported cases of meningococcic meningitis; other similar but more specific symptoms are stupor, convulsions and coma. The last symptom has proved to be of grave prognostic significance in meningococcic meningitis as reported in recent epidemics. Either increased intracranial pressure or meningeal irritation may be evidenced by localizing signs. These signs, in the case of increased intracranial pressure, may be manifested by engorgement of the veins of the ocular fundi or by choking of the optic disks. Meningeal irritation may give rise to spasm of the muscles of the neck, back or hamstring group with resultant stiffness of the neck or back or a positive Kernig sign. The presence of symptoms or signs of this type constitutes an indication for detailed examination of the spinal fluid with cell counts and chemical analysis, but exact diagnosis and proper treatment are dependent on positive indentification of organisms from direct smear or culture.

Sulfonamide Drugs Available for Treatment: The sulfonamide drugs available for the treatment of acute bacterial meningitis are five in number: sulfanilamide, sulfapyridine, sulfathiazole, sulfadiazine and sulfamerazine. The last named which is the monomethyl derivative of sulfadiazine has recently been released for use. Experimental work also is being carried out with sulfamethazine which is the dimethyl derivative of sulfadiazine, but the latter preparation is not yet available for commercial use.

Pharmacologic Properties: With this number of compounds available for use it is well to have some knowledge of their simple pharmacologic properties in order to be able to select the one most suitable for the infection to be treated or to be able to use successfully whatever drug may be available. Important properties concerned, as can be seen from table 1, are solubility, absorption, excretion, acetylation, diffusion, toxicity and bacteriostatic effect. From table 1 too it can be seen that all of the drugs with the exception of sulfanilamide are poorly soluble. Therefore when it is desired to use any of them parenterally, it will be necessary with the exception of sulfanilamide to use the more soluble sodium salt of the compound. Sulfamerazine is about two and a half times as soluble as sulfadiazine. All of the drugs are well absorbed when given orally, but sulfapyridine may be absorbed irregularly. This irregularity of absorption may exist not only among individuals but may occur from day to day in the same patient and may result in failure to produce satisfactory concentrations of this drug in the body. This difficulty, however, may be eliminated by giving the sodium salt of sulfapyridine parenterally.

All of the drugs are well excreted in the urine but sulfathiazole may be excreted so rapidly at times that it may be impossible to obtain a satisfactory concentration in the body and this may be true even when the drug is used parenterally. Both sulfadiazine and sulfamerazine tend to be excreted more slowly than the other drugs and therefore tend to accumulate in higher concentrations in the body more rapidly than do the other drugs.

Acetylation occurs with the administration of any sulfonamide and is detrimental because the acetylated derivatives of the sulfonamides are therapeutically inactive and quite insoluble. Because of

their insolubility, they are eliminated with difficulty by the kidneys. Sulfadiazine and sulfamerazine possess an advantage over the other drugs, except sulfanilamide, in that their acetyl derivatives are more soluble in urine than are the acetyl derivatives of the other drugs. It may be noted that only from 10 to 15 per cent of sulfanilamide, sulfadiazine and sulfamerazine forms an acetyl derivative, but that from 10 to 30 per cent of sulfathiazole and from 15 to 70 per cent of sulfapyridine undergo this change.

Diffusion of drug into the cerebrospinal fluid is important in meningitis and it may be noted in table 1 that with sulfathiazole this diffusion amounts to only about 30 per cent of the concentration of drug in the blood, whereas, with the other compounds it is two or two and a half times this figure. In spite of this poor diffusion, sulfathiazole, as is known, has been shown to be effective in meningitis.

The toxicity of the various compounds is important and will be discussed in more detail later in this paper, but there is no question that sulfadiazine in general is less toxic than the other drugs although it may give rise to renal complications. Sulfamerazine to date seems to be about as toxic as sulfadiazine. The danger of incurring weakness of the lower motor neurones from use of sulfamerazine, because it is a methyl compound, seems rather remote as a result of animal experiments and clinical use to date.

From the standpoint of bacteriostatic action sulfanilamide possesses a definite disadvantage because it is effective largely for only meningococci and hemolytic streptococci and therefore should not be used when the causative organism is unknown. All of the other drugs are effective for the other organisms which have been mentioned as causative agents in acute bacterial meningitis, but sulfathiazole appears more effective for staphylococci and sulfadiazine for Hemophilus influenzae. With all of the foregoing in mind, sulfadiazine appears to possess advantages which make it the sulfonamide of choice for the treatment of meningitis at this time, although sulfamerazine because of its greater solubility and tendency to accumulate in higher concentrations in the body may possess advantages which further trial alone will reveal.

Fundamental Principles of Treatment: In considering treatment and dosage, there are certain general fundamentals which are important with all of the drugs. In the first place, while it is true that infections of mild severity and even of moderate severity such as pneumonia, may be successfully treated without the benefit of laboratory aid; nevertheless, it is also true that the best results will be obtained in severe infections such as meningitis if accurate control is kept of the concentration of drug in the blood. If facilities for this procedure are lacking, treatment must be dependent on clinical response on the one hand and toxic symptoms on the other, but this is an unsatisfactory and

Table 1

PHARMACOLOGIC PROPERTIES OF SULFONAMIDE DRUGS

Influencing factors	Sulfanilamide	Sulfa-pyridine	Sulfa-thiazole	Sulfa-diazine	Sulfa-merazine
Solubility in water at room temperature	1 per cent	0.03 per cent	0.1 per cent	0.01 per cent	0.025 per cent
Absorption	Good	Fair (irregular)	Good	Good	Good
Excretion	Good	Good	Good (?) (rapid)	Good (slow)	Good (slow)
Acetylation	Slight (10-15 per cent)	Great* (15-75 per cent)	Slight* (10-30 per cent)	Slight (10-15 per cent)	Slight (5-10 per cent)
Concentration in spinal fluid †	80-90 per cent	60-80 per cent	30 per cent	60-80 per cent	Not definitely known
Toxicity	Moderate	Moderate †	Moderate --	Mild	Mild (?)
Bacterio-static effect	Hemolytic streptococci and meningococci	Hemolytic streptococci, pneumococci, staphylococci and meningococci			

*Compound insoluble.
† Compared with concentration in blood.

hazardous method owing to the variations in absorption, excretion and actylation shown by the drugs.

It is necessary to bear in mind that the action of the sulfonamides is dependent on only two factors: ability to reduce multiplication of organisms, and ability to weaken organisms so that they can be overcome by normal body mechanisms. Thus, the sulfonamides do not aid in the formation of antibodies or other immune processes and therefore their early use is indicated.

It is further known that the action of sulfonamides is inhibited by the presence of peptone from protein from broken-down tissue and of para-amino-benzoic acid. Both of these substances seem necessary for bacterial metabolism and when they are present in excess, bacteria take them up in preference to the sulfonamides. Therefore it is essential to treat severe infections before extensive foci of infection develop with accompanying tissue destruction. Experience has shown that the best results are obtained in meningitis when desired high concentrations are obtained as soon as possible and maintained until recovery occurs. Undoubtedly many lives have been lost because of delay for twenty-four to forty-eight hours in starting treatment while awaiting some laboratory report as that of a culture. Treatment always should be started when the presence of meningitis is first suspected; the details of the diagnostic picture can be established later.

Dosage: Experience at the Mayo Clinic has shown that high concentrations of drug in the blood are desirable. We thus try to obtain concentrations of 16 mg. of sulfanilamide, sulfapyridine and sulfadiazine per 100 c. c. of blood and this seems true for sulfamerazine also. A concentration in the blood of 10 to 12 mg. of sulfathiazole per 100 c. c. seems sufficient. Concentrations of this type are usually more rapidly obtained in adults by giving the sodium salt drug intravenously in an initial dose of between 5 and 6 gm. (75 to 90 grains). Sulfanilamide may be given subcutaneously or intravenously in an 0.8 per cent solution in physiologic saline solution and we have preferred to use the subcutaneous method. The sodium salts of the other drugs are usually given intravenously initially in a 5 per cent solution in distilled water and may be used in this manner or subcutaneously in a 0.3 to 0.7 per cent solution in physiologic saline for maintenance if desired. Our practice has been to give this initial dose intravenously and at the same time to start oral use of the drug in doses of 1 to 1.5 gm. (15 to 22½ grains) every four hours. A second intravenous dose of the sodium salt usually has been given in seven hours. The concentration of drug in the blood has been checked two or three times daily for several days in order to maintain it as desired. We have supplemented oral use of the drug by parenteral use of the sodium salt as necessary to maintain this level. In using sulfadiazine or sulfamerazine orally, the drug may often be given at intervals of six hours instead of four and may often be given parenterally at intervals of twelve hours instead of eight. Recently some reports have mentioned the successful use of sulfadiazine for meningococcic meningitis in concentrations as low as 8 mg. per 100 c. c. of blood in order to lessen the occurrence of renal complications, but we have had no experience with these concentrations in this condition and our experience in the other types of meningitis has indicated the necessity for higher concentrations. Giving the drugs intravenously initially seems to eliminate the necessity for the risk of incurring the dangers of intrathecal administration. We also have not felt it necessary to give the sodium salts intramuscularly in 20 to 33.3 per cent solution, as this procedure would seem to entail a possible danger of tissue destruction.

Supplementary Data on Treatment and Toxic Manifestations: As adjuncts to the successful use of the sulfonamides in meningitis, the following procedures will be found of value: 1. When any focus of infection exists which permits of eradication by surgery, it is advisable to operate to insure recovery. 2. In prolonged infections transfusions of 250 c. c. of whole blood are advisable at intervals of two or three days, both for anemia if present and for tonic effect. 3. Patients who become debilitated may be benefited by the use of vitamins. 4. The use of 5 mg. of para-amino-benzoic acid per 100 c. c of culture media employed for cultures from patients receiving sulfonamides offers an aid to diagnosis through more rapid growth of organisms. 5. Treatment must be continued with desired concentrations until four or five days after complete recovery has seemed to occur and a reduced dosage should be employed for a full two weeks after temperature is normal. In staphylococcic and pneumococcic infections it is best to continue giving some drug for three weeks after temperature is normal in order to reduce the possibility

of recurrence. 6. In meningitis caused by hemolytic streptococci with marked toxicity, convalescent scarlet fever serum may be of some benefit in combating toxicity and the same is true of staphylococcus antitoxin in severe staphylococcic meningitis.

The question of specific serum as an adjunct to sulfonamide treatment is one on which there is bound to be some divergence of opinion until a large number of cases have been studied. Recent experience indicates, however, that in the treatment of meningococcic type of meningitis. specific serum adds little to the effect of sulfonamides although its use would seem justified in cases in which results are poor early in treatment. The problem, however, is different in pneumococcic meningitis because of the high mortality rate which exists and when type specific serum is available its use is indicated. The same is also true of influenzal meningitis.

It has been our experience that when sulfonamides are used in the treatment of meningitis, spinal puncture seems unnecessary save as a diagnostic measure or for the relief of symptoms such as headache which result from increased intracranial pressure.

Toxic Manifestations: The subject of drug toxicity concerns all of the sulfonamides because of their close chemical relationship and because they tend to follow a similar pattern in toxic effects. The longer the drugs are administered, the greater is the likelihood of encountering trouble and therefore treatment of meningitis offers a greater hazard from this standpoint than do other less severe infections. The various toxic effects of the sulfonamides are too familiar to all to warrant a systematic recital at this time. but there are some points of importance in connection with them which should be emphasized.

In the first place, practically all toxic effects can be detected by observation alone. Symptoms such as headache, nausea with vomiting, dizziness and anorexia, are of course self-evident. Abnormalities of fluid balance may be noted easily and even bloody urine frequently may be detected by inspection of a gross specimen. Drug fever, rashes, anemia and jaundice all may be easily observed. Leukopenia and granulocytopenia alone can be detected only by laboratory examination. They tend to occur most commonly with sulfapyridine and also with sulfanilamide and may occur during or after the second week of treatment. Acute anemia may occur during the first few days of treatment, it occurs most commonly with sulfanilamide, and also with sulfapyridine. Both of these conditions as well as jaundice produced by the drug are ordinarily indications for discontinuing use of the drug. Drug rash and fever associated or unassociated occur most frequently with sulfathiazole and usually are a sensitivity type of reaction appearing from nine to twelve days after treatment is begun although they may occur earlier or later. Drug fever may be low or high and associated with chills so that it may resemble septic fever. Drug fever should always be suspected when a patient has made improvement and then has an exacerbation of fever while still receiving drug. Fever during convalescence, however, should always be suspected of being, and treated as, a relapse until definitely proved otherwise. Ordinarily drug fever and rash constitute an indication for discontinuing sulfonamide treatment but in meningitis sulfonamides are usually essential rather than optional and when a rash occurs a change should be made to another sulfonamide instead of discontinuing treatment. We have frequently seen rashes and fever from sulfathiazole rapidly disappear when administration of this drug was discontinued and replaced by sulfadiazine.

Renal complications form a real hazard with use of sulfonamides and occur most frequently with sulfathiazole and sulfapyridine but may occur with sulfadiazine and sulfamerazine. As all of the drugs are practically entirely eliminated in the urine, maintenance of an intake of fluid of 3,000 c. c. or more and an output of urine of 1,400 c. c. or more will do much to eliminate renal complications. By following this procedure oliguria readily becomes evident and the margin of safety is greater than if a low intake and excretion of fluid are maintained. If renal complications do occur, they can frequently be successfully combated by promptly discontinuing use of the drug, forcing fluids and finally by ureteral catheterization if this is necessary.

A real contribution in reducing renal complications has been made by Gilligan and associates in demonstrating the increased solubility of sulfadiazine and acetylsulfadiazine in a neutral or slightly alkaline urine. Sulfadiazine is twenty times more soluble and acetylsulfadiazine thirty times more soluble with a pH of 7.5 than a pH of 5.0. At neutrality or a pH of 7.0 sulfadiazine is seven times

more soluble and acetylsulfadiazine thirteen times more soluble than with a pH of 5.0. Sulfadiazine itself has a tendency to acidify urine and the urines of most patients receiving sulfadiazine will be found to have a pH of 5.0 to 6.0. These figures indicate a reason for the occurrence of toxic renal complications and also indicate the value of alkalization therapy. Clinical experience has demonstrated that adjuvant alkali therapy will markedly reduce the occurrence of renal complications when sulfadiazine is used. Gilligan and associates have suggested from their studies that it is necessary for satisfactory results to give an initial dose of 6 gm. (90 grains) of soda bicarbonate, followed by 15.6 gm. (234 grains) daily divided into 2.6 gm. (39 grains) doses given at intervals of four hours. They have suggested that this amount of alkali be given to patients receiving as little as 3 to 4 gm. (45 to 60 grains) of sulfadiazine daily. For patients receiving 12 to 15 gm. (180 to 225 grains) of sulfadiazine daily, they suggested that 19.5 gm. (292½ grains) of soda bicarbonate be given daily in equally divided doses at intervals of four hours. Actually these doses of soda bicarbonate have produced no ill effects from alkalosis and in consideration of the high percentage of renal complications occuring when large amounts of sulfadiazine are given, their use seems more than justified. Urinary pH may be roughly checked by using litmus or nitrazine paper which turns blue in neutral or alkaline urine. Alkaline therapy is also of some value as Schwartz and his associates have shown when sulfathiazole is used but its value is not as great as when used with sulfadiazine. It is of no value when used with sulfapyridine because of the poor solubility behavior of this drug and its acetyl derivative but should prove to be of greater value when used with sulfamerazine than when used with sulfadiazine. It also seems likely as Loughlin and associates have noted that adjuvant alkali treatment with sulfadiazine may initially cause the level of drug to rise more rapidly in the blood.

Comment

In conclusion, it can be stated that the common forms of acute bacterial meningitis constitute a serious disease entity and that the sulfonamides afford a valuable therapeutic measure for the treatment of all save the tuberculous type. The prognosis in acute bacterial meningitis is largely dependent on the promptness with which treatment is started as well as on the maintenance of adequate dosage with sulfonamides throughout the course of illness and for a long enough period to prevent recurrences. Much may be done to eliminate serious complications from drug toxicity through careful observation and institution of proper measures for their prevention. If such complications do occur, they frequently will subside satisfactorily if appropriate treatment is promptly applied.

GASTRIC AND DUODENAL ULCER. SURGICAL MANAGEMENT

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Although the term "peptic ulcer" has been used extensively in reference to benign ulcerative lesions involving the upper gastro-intestinal tract, we should consider ulcerations of the stomach and duodenum separately. The duodenum is affected with far greater frequency, and although fatal as well as troublesome conditions take place in this structure, malignancy is rare. The stomach on the other hand, although less frequently the site of benign ulcer, is the most common seat of cancer in the human body. Since ulcer of the duodenum responds well to palliative measures, one is prone to have this in mind when dealing with ulcer of the stomach. This fallacy has lead to delay in recognizing early cancer of the stomach and many lives thereby have been needlessly sacrificed. We know little about the cause of these maladies but we do know that proper methods of treatment are effective. For the sake of a better understanding of the true situation, I believe we would do well to avoid the term "peptic ulcer" entirely. Certainly, we must take a very serious viewpoint of all ulcerative lesions of the stomach. These must be considered as malignant until proven benign. Any delay on the part of the physician to ascertain the true nature of this disease will rob the patient of a definite chance for life.

Duodenal Ulcer: Since the duodenum is the commonest site for ulcer, and its frequency has led to the development of an effective palliative regimen, it is perhaps better to dwell on the surgical aspects of this lesion first. The exact etiology of duodenal ulcer is not clear. Men

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are approximately six times as likely to have it as women. It is known that stomach acidity is necessary for the formation of ulcer of the duodenum. Why does one man develop ulcer and his apparent exact replica not acquire it? Factors of worry, work, fear, improper diet, alcohol and tobacco, have all been accredited as a cause. These may contribute to the formation of ulcer but cannot be primary in this respect, since we see too many individuals who are exposed to all these troubles and vices and yet are free from ulcer. It is our belief that there are underlying anatomical and physiological variations in man that allow for the excessive secretions of acid, as well as a greater sensitivity of the tissues involved, in some individuals, that are not present in the average person. It is possible that there is a governing hormone that is poorly developed or even absent in the ulcer patient, which is effective in protecting the average citizen. Scientific effort, already developed to a point suggesting that the true answer is near, will in time solve this problem of etiology. Until then, our efforts of treatment must be continued along the lines that have been developed by the methods of trial and error.

The management of the ulcer patient has now been perfected by our internist colleagues, so that the majority of such victims can be taught how to live with their malady in comparative peace and happiness. In our clinic, approximately 80 per cent of the patients who come to us with duodenal ulcer are effectively cared for by proper guidance as to diet, habits, etc. These individuals are able to carry on their usual occupations in most instances. An occasional short period of rest at home or in the hospital may be necessary to curtail an exacerbation, after the initial lesion has been controlled. Although some are treated as ambulatory patients throughout, the majority are hospitalized for a time at first.

Complications occur requiring surgical intervention in approximately 20 per cent of duodenal ulcer victims. The most evident of these is acute perforation. Here we have a true emergency and there is little excuse for the failure of an early correct diagnosis and proper treatment. One must not be confused by the lack of ulcer symptoms, since in a certain number of individuals with acute perforation, there seems to be little in the history to indicate that an ulcer existed. This may be due to the fortitude with which some people bear discomfort, but it is more likely due to the development of an ulcer in an area of the duodenum that is not well supplied with sensory nerve fibres. When complete perforation occurs, the immediate leakage of irritating substances from the upper gastro-intestinal tract causes sudden and severe pain. This often produces a state of shock as evidenced by faintness, pallor, elevation of pulse, and lowering of blood pressure. Examination reveals rigidity of the upper abdomen, particularly the right upper quadrant within a few minutes of onset. This spreads rapidly over the entire abdomen as contamination of the peritoneal cavity increases. Physicians should lose no time in hospitalizing such a patient. The leucocyte count will be found elevated in the majority of cases; when it is normal or low, the prognosis is bad. Time should rarely be wasted to prove the diagnosis by roentgen films to demonstrate free air within the abdominal cavity. It is safer to make a negative exploration under suitable conditions, than it is to wait until the diagnosis of diffuse peritonitis is obvious.

The best method of treatment is early closure of the perforation. In our clinic, the mortality rate in all age-groups was under 5 per cent if the closure could be accomplished within three hours of perforation; between the third and sixth hours, the mortality rose to 18 per cent. In nearly all patients who survived operation after the twelfth hour, it was found that the perforation had spontaneously sealed itself off against a neighboring structure. One may assume then that the best results are obtained by the earliest possible closure. If operation cannot be undertaken until twelve hours have elapsed, one might do well to consider conservative measures, i.e Wangensteen suction, intravenous fluids, and regularly repeated small doses of morphia.

Spinal anesthesia is preferred by most surgeons in this emergency. The operation should consist of aspirating the contaminating fluids escaped from the viscus with special emphasis on that invariably found between the liver and the diaphragm. Closure of the perforation is best accomplished by securing a tab of omentum over the opening as advocated by Roscoe Graham. The abdomen should be closed without drainage. Concomitant gastro-enterostomy is not indicated. Rarely, will a perforation be located in such a manner that closure cannot be accomplished. Then, only, is resection at the acute stage justifiable.

Sulfadiazine, grams 5, should be given intravenously in 1500 cc. of normal salt solution. This should be started while preparations for the operation are under way. Adequate levels of the drug can be maintained daily thereafter. This, we are sure, is safer and as effective as intraperitoneal sulfonamides, which are absorbed through the portal system with such rapidity that liver damage may occur. Continued Wangensteen suction should be maintained for three days, longer if there is evidence of inflammatory obstruction at the pylorus, or lack of return of normal intestinal peristalsis. Fluids, plasma, amino acids, and blood given intravenously will maintain the patient adequately until a soft diet can be safely given.

After recovery from acute perforation, one may be faced with the decision as to future treatment. It is evident from our records that these patients should be treated as any other person with duodenal ulcer. If they adhere to a reasonable diet and mode of life, they are apt to have no further trouble. If they disregard their ulcer diathesis, they will likely have difficulty. Nine patients in our group were re-admitted at some later date with another perforation, strangely enough, they all survived the second closure. A considerable number came to radical surgery either on account of persistent symptoms or stenosis with obstruction. The majority, however, were able to carry on satisfactorily without further surgery.

Massive hemorrhage is another complication of duodenal ulcer that requires surgical consideration. Most ulcers bleed some and over one-third of the cases in our clinic bled enough for the diagnosis to be made without the aid of the laboratory. The most startling type of bleeding ulcer is the sudden massive hemorrhage that produces shock. In our analysis of this group, Benedict and I found that 22 per cent of all grossly bleeding ulcer patients were of this type. We were attempting to clarify the situation as regards the question of spontaneous cessation o. bleeding and death from hemorrhage. The only factor of importance that we could find was the age of the victim. In the younger patients nearly all recovered from the hemorrhage while those beyond middle life one-third died during that hospital admission. We still believe that this discrepancy is due mainly to the degree of sclerosis in the vessel involved. Thus, the elastic vessel allows the production of a firm thrombus while the sclerotic vessel may fail to contract in a satisfactory manner.

We believe that these patients under the age of forty-five have such a good chance for spontaneous remission that they should be treated conservatively during the acute episode. In those over forty-five, one may do well to seriously consider early surgical intervention. If this is undertaken, it must be the the first three days of the onset of blood loss. If one waits until a week or more has passed, the outcome will be doubtful. I have attempted rescue in 6 elderly patients after the 7th day of bleeding with only one recovery; while in ten cases operated upon before the third day, nine have survived. If one has delayed operation until the tissues are devoid of those protective elements obtained from the absorption of food from the gastro-intestinal tract, then conservative measures should be continued, since surgery undertaken under these circumstances has little to offer. After a patient has successfully recovered from a bout of severe bleeding, the question of further treatment must be considered. Most of these bleeding ulcers are located on the thin posterior wall of the duodenum. The bed of the ulcer is eroded pancreatic tissue. Large blood vessels are in contact with the area. Scar tissue healing of such a lesion is very dense, unelastic, and prone to break down. Thus, these victims have a difficult time keeping pain free and are subject to repeated bouts of activity often associated with hemorrhage. For these reasons, I believe that such a patient must be carefully evaluated, and in a large percentage of them, a surgical cure accomplished at a time of election.

In a certain number of patients with duodental ulcer, we find that the healing process in time will produce scar tissue obstruction. These individuals must have this mechanical condition corrected to prevent starvation. The onset of this condition is insidious and usually occurs in individuals with a long ulcer story. The majority are beyond the fifth decade of life and have had repeated episodes of ulcer activity. They often have little pain at the time of obstruction, but a sensation of distress or fullness with occasional vomiting is the rule. Most of them have lost weight. These must be distinguished from the acute obstruction associated with edematous reaction about an active ulcer. This acute group will respond to decom-

pression with a Levine tube while the true cicatricial obstruction will fail to do so.

We were under the impression, at one time, that stenosing ulcer could safely be treated by pyloroplasty or gastro-enterostomy. We have found however that even in these elderly patients, anastomotic ulcer occurred in 25 per cent of our cases. Apparently, the situation is masked by the low acidity found during the obstructive phase. As soon as obstruction is relieved, the old tendency for hyperacidity and ulcer activity returns. For these reasons, we now feel that patients with stenosing ulcer should be treated by radical partial gastrectomy. The operation can be carried out under the present safeguards of surgery with less risk in this group than in other complications of duodenal ulcer.

Persistent symptoms in spite of adequate conservative measures bring a small percentage of duodenal ulcer victims to the surgeon. This group must be carefully selected by complete cooperation between the internist and the surgeon. As the danger of proper surgical procedures has diminished, there is a definite trend to increase the number of patients in this group of so-called intractable ulcer victims. The necessity of keeping pain free and being able to carry on one's occupation has brought about some change in our attitude in this situation. These patients are mostly men of the high pressure type. They are coping with serious business problems and become nervously unstable due to the fear of a return of activity of their ulcer. Many of these bleed profusely with their bouts of recurrence. Each episode leaves its mark on the individual, and it becomes increasingly more difficult to keep them well. By the time the average patient in this group is given up by the medical department, the surgeon has a true challenge on his hands. His responsibility is not only to insure a living patient but to restore the health of this individual. This requires all the skill in preparation, anesthesia, operative technique, and after care, so far developed. The convalescence must be carefully followed until the patient is completely stabilized and has entirely regained his self-confidence. Many such, are immediately rehabilitated and wonder why they have been denied this complete relief for so long. Others have adjustments to make as regards diet, mode of life, etc., but are pain free and relatively well. Nearly all of them are able to take their place as an economic unit of society.

Anastomotic ulcer is a complication of palliative surgical effort for the relief of duodenal ulcer. This situation occurred so often after gastro-enterostomy and inadequate resection that it finally became the chief cause for the abandonment of surgery in favor of medical treatment. It is truly a serious lesion and, in certain instances, leads to gastrojejuno-colic fistula which creates one of the most difficult situations met in surgery. All stomal ulcers respond poorly to conservative measures, and all are more serious from a surgical point of view than the original lesion. Our experience comprises more than 75 of these complications of surgery. Two-thirds of them develop in the first two years after operation but occasionally one meets this problem twenty years or more following the original procedure. Adequate resection for duodenal ulcer, when any operation is done except in acute perforation, will produce the lowest incidence of jejunal ulceration.

Operative Procedure: Aside from the simple closure of acute perforation, there has gradually come about a radical attitude regarding the type of surgery indicated in duodenal ulcer. Analysis of large series of results from various clinics clearly demonstrates that all palliative operations directed to the relief of this lesion have given a high percentage of failures. It would appear that the majority of good results obtained from gastro-enterostomy, pyloroplasty, and pylorectomy, may have been expected if these patients had been kept on a non-operative regimen. Now, if a patient is considered to have a better chance for relief with surgery, we know that such a patient will be very apt to remain incapacitated if a palliative operation is done. Large numbers of cases have now been recorded showing the high percentage of excellent results when an adequate resection has been accomplished.

We are sure, at this time, that the most likely operation to succeed is one that eliminates all of the antral mucosa. It is well, when feasible, to include the first portion of the duodenum if this usual site contains the ulcer itself. The operation is easier to accomplish and the anastomosis is enhanced, if a portion of the fundus on the greater curvature side is removed. We feel that one should embark on a resection that will include the distal two-thirds of the stomach, the pylorus, and first portion of the duodenum. The lesser curvature

should be sectioned high, since it is in this region that acid activating cells are most likely to be left in situ.

I prefer to use a left rectus paramedian incision and begin the operation by freeing the lateral border of the second segment of duodenum. This makes it possible to determine the course of the common bile duct and its proximity to the inflammatory area surrounding the ulcer. If it appears that the stage or extent of inflammation encroaches upon the vital structures in the liver sulcus, one may then plan a resection for exclusion of the ulcer area. Usually in a properly prepared patient, one finds that there is adequate duodenum above the papilla of Vater so that an ideal resection can be carried out. Having sized up this situation, the procedure is made easier by freeing the greater curvature of the stomach and then securing the left gastric vessels high on the lesser curvature. This permits division of the stomach at a high level. The distal segment can then be turned in any direction so that the difficult part of the dissection is approached from all sides. Often the posterior wall of the duodenum is entered at the ulcer site where it has eroded into and becomes adherent to the head of the pancreas. When this occurs, it is well to get rid of the main specimen and free the posterior border of the duodenum by careful dissection. The cause of the most serious postoperative complication is poor management of the duodenal stump. It is important and should always be possible to secure three quarters of an inch of healthy duodenum above the papilla of Vater. If one inverts this stump by three rows of fine catgut sutures, leakage will not occur. The fact that catgut creates more reaction in the tissue than non-absorbable material may, in fact, enhance the outcome in this particular procedure. When one has misjudged the distance and finds too little normal tissue for suitable closure, it is well to provide suction drainage in the subhepatic space. The method of Chaffin is best if such drainage is necessary.

If the extent of inflammatory reaction has been estimated on early inspection to make adequate closure of the duodenum uncertain, then one may embark on an exclusion procedure. The technique is carried out as though an ideal resection was to be accomplished down to the antrum, three fingers breadths proximal to the pylorus. The antrum is transected at this level and the mucosa carefully removed from it. This leaves a segment that, with care, can be adequately inverted or one may use an adoption of Schrimgers' and Estes' idea, recently advocated by Wagensteen, and close the muscularis and serosa together, without inversion. In approximately twenty patients operated upon by this method, the results have been as good as in those in whom an ideal resection had been carried out. One may not trust the thinned-out segment of antrum and leave the mucosa intact, if a second operation six to eight weeks later is carried out. McKittrick thinks well of this two-stage attack at this time and will eventually report the results on a series of cases so treated. Under no circumstances must one be content by the exclusion operation as finally advocated by Finsterer; since all of us, who have used it, have found that a higher percentage of anastomotic ulcer follow it than any other procedure. In his original communication on this subject, Finsterer stated that the mucosa could be removed but apparently abandoned the idea later.

Continuity between the remaining stomach segment and the jejunum is usually carried out as a short loop posterior Hofmeister-Polya anastomosis. The anticolic anastomosis has not been as satisfactory in our hands. We have seen one case of fatal high intestinal obstruction follow the anterior hook-up made in another clinic. We have had some difficulty from the pressure of this loop on the transverse colon; also, there has occurred an objectionable regurgitation of bile from the proximal loop in some of our cases. The anticolic method is popular at the moment with many excellent surgeons. It is likely that we do not carry out this easier method of anastomosis correctly to obtain universally good results. We do use it when the operation is a secondary one or when the mesocolon is very fat; also, in cases of extremely high resections.

We have used two rows of fine chromic gut on atraumatic needles in the anastomosis. Non-absorbable sutures are used only to hold the rent in the mesocolon to the stomach segment high above the anastomosis. Cotton is used for ties except for the larger vessels, which are taken en masse and include considerable fat; on these, we use No. 1 chromic gut.

For more than a year now, we have routinely used a No. 16 catheter introduced through the distal limb of the jejunum and threaded back through the anastomosis, by the aid of a lubricated stilet, into the stomach segment. This is brought out through a tiny stab wound and elimi-

nates the necessity of the postoperative use of the Levine tube. If the patient is depleted, we use a second No. 16 catheter into the jejunum at a slightly lower level for feeding. This makes the maintenance of nutrition, vitamins, and fluid a certain procedure. These catheters are held in the jejunum by means of two purse-string sutures. They are fixed to the skin with silk but without penetration of the tube by the needle. They can be removed after the tenth day, if not needed longer. No serious sequellae have followed the method in a large number of cases.

Gastric Ulcer: The responsibility of the physician regarding ulcer of the stomach cannot be over estimated. It is necessary to clearly separate in our minds this lesion from the more common duodenal ulcer. Because the symptoms are similar in the early stages and because response to treatment has been good in benign ulcer of the stomach, there has been too little effort on our part to consider the possibility of early malignancy. We have seen many typical examples of delay in recognizing the true situation to a point of inoperability. The differential diagnosis, between benign gastric ulcer and early carcinoma of the stomach, is impossible in at least 10 per cent of the cases by any of the known methods of study. The pathologist cannot be sure of the exact nature of the lesion until he has studied the specimen microscopically.

In an analysis of the records, over a ten year period in our clinic, we found that the clinical diagnostic error in these cases was appalling. The physician, the roentgenologist, the gastroscopist, and the surgeon, were in accord with the diagnosis of benign ulcer in 18 cases proven to be cancer. This was from a group of 69 stomachs resected under the diagnosis of ulcer. There were twelve additional cases of cancer in this group that were thought to be benign by more than 50 per cent of the observers. In a study of the entire 255 cases of ulcer of the stomach exclusive of acute perforation treated in this hospital during that period, 39 or 14 per cent were eventually proven to have cancer; 13 out of 175 of these had been treated medically, and 4 out of 23 had been treated by gastroenterostomy. Some of those treated medically were eventually subjected to surgery, in many instances, too late for cure.

The results of medical treatment for gastric ulcer, are not as good as those for duodenal ulcer. In the group studied by Judd and Priestley about half of those treated medically had a satisfactory result and 9.6 per cent of them were eventually proven to have cancer.

The results of resection for gastric ulcer are better than for duodenal ulcer. Only 1 out of 162 cases followed by Judd and Priestley had an unsatisfactory result. Neither these observers nor ourselves have seen anastomotic ulcer develop following gastrectomy for gastric ulcer. The mortality rate in this group is lower because the duodenal stump creates no problem. In a consecutive series of gastrectomy for gastric ulcer done in our clinic by various members of the visiting and resident staff, there was 1 death. In all reports, the mortality rate is about one-half that of subtotal gastrectomy for duodenal ulcer.

In an attempt to establish criteria for better diagnosis in ulcerative lesions of the stomach, we analysed the age, duration of symptoms, acidity, location of the ulcer and the size of the ulcer. We hoped that these studies might throw some light on the subject. On the whole, these data were disappointing, but some evidence developed that serves as guidance in the management of these cases.

The location of the ulcer is of importance since 65 per cent of those in the immediate prepyloric region and 90 per cent of those on the greater curvature were malignant; 20 per cent of those involving the anterior or posterior walls and 10 per cent of those on the lesser curvature proved to be cancer. Since 50 percent of all ulcers were found on the lesser curvature, we must not be too optimistic about this group. In fact, due to the greater incidence, we found the greatest number of diagnostic errors in this region.

The size of the ulcer was of slight help, but on the whole the smaller the lesion the more likelihood of its being benign. The exceptions of this rule occurred most frequently in the prepyloric region where two instances of ulcer less than 1 cm. in diameter were proven to be malignant. On the other hand, one enormous benign ulcer was removed by total gastrectomy under the diagnosis of unfavorable cancer. The average size of the benign ulcers was 1.7 cm., while those showing cancer averaged 2.3 cm. in diameter. The majority of ulcers over 2.5 cm. in size proved to be cancer.

Gastric acidity has commonly been relied upon as a guide to diagnosis. It is true that 60 per cent of our proven cancer cases showed no free acid, while those in the "ulcer-cancer" group were just as likely to show acidity as those in proven benign ulcer. Therefore, we can rely only on the

likely diagnosis of cancer in the acid free stomach, while the presence of acid still leaves one in doubt as to the true nature of the lesion.

The age of the patient is of some help in the differential diagnosis in that the chance of malignancy is greater in the older age group. If one combines the data concerning age with that of duration of symptoms, one gets a better lead on the situation. Patients over fifty years of age with gastric ulcer, producing symptoms of less than one year, are five times as likely to have cancer as benign ulcer. On the other hand, patients in this same age-group with symptoms of five or more years are five times as likely to have benign ulcer as cancer. The short story of indigestion, gaseous eructations, epigastric distress associated with gastric ulceration, is of great aid in the diagnosis after the thirtieth year of life and becomes increasingly important as age advances. Every conceivable effort should be made to curtail the promiscuous advertising of medicines to relieve indigestion, hyperacidity, etc. It is most important that lay people have a better understanding of the danger signals of early cancer of the stomach. Diagnostic methods should be thorough, and if ulcer of the stomach proves to be the cause of symptoms, however slight, this patient must be kept under constant surveillance until the true diagnosis is made. It is only by strict attention to these details that we can hope to decrease the appalling death-rate of cancer of the stomach in this country.

It is important to realize that cancer patients, subjected to radical operation under the diagnosis of benign ulcer, have twice as good a chance for a five-year cure as those who had pre-operative clinical evidence of malignancy. For this reason, we believe that one should evaluate the situation carefully and carry out a wide resection including all lymph node areas in all suspicious cases of gastric ulcer; by so doing, the cure-rate can be increased.

One must not be guided by the disappearance of symptoms or the improved appearance by roentgenograms or gastroscopy after a period of treatment on a good ulcer regimen. We have seen instances of malignant ulcer responding so well to palliative treatment that symptoms disappeared, lost weight regained, and the lesion no longer seen by the roentgenologist or the gastroscopist, only to have the patient return within a few months with inoperable cancer. This apparent temporary improvement is due to the subsidence of the secondary inflammatory reaction about the lesion. It is possible that the crater occasionally becomes filled with cancer cells so that it is no longer seen in the films or by gastroscopic observation. Therefore, our responsibility must not cease when such observations are made. We must insist that the patient return for examination at frequent intervals.

We recommend immediate radical surgery if:

1. Ulcer symptoms are of short duration and the patient is over fifty years of age.
2. The ulcer is over 2.5 cms. in diameter.
3. There is no free hydrochloric acid in the stomach analysis.
4. The ulcer is in the prepyloric region or the greater curvature.
5. The ulcer is chronic and on the lesser curvature.

We recommend hospital observation and treatment for one month if:

1. The ulcer is acute and in a young patient.
2. The ulcer is 1 cm. or less in diameter.
3. The ulcer is on the lesser curvature or anterior or posterior wall of the stomach.
4. Healing is not complete in one month, surgery should be undertaken.
5. Healing is apparently complete in one month, the patient must be observed at frequent intervals.

Summary and Conclusions

1. Duodenal ulcer is primarily a medical problem.
2. Surgery is indicated in about 20 per cent of the cases.
3. Acute perforation accounts for about one-fourth of these and requires simple closure at the earliest possible moment.
4. Ulcer patients having blood loss, persistent symptoms on good medical treatment, and those with true scar-tissue obstruction should be given the benefit of surgery. The best results are obtained by a removal of not less than half the distal stomach, pylorus, and first portion of the duodenum.
5. Gastric ulcer is primarily a surgical problem.
6. The differential diagnosis between benign and malignant ulcer of the stomach is impossible in at least 10 per cent of these patients.
7. Ulcers of the greater curvature and prepyloric regions of the stomach and those of short duration in the older age-group should be immediately operated upon.
8. Small acute ulcers on the lesser cur-

vature or anterior or posterior walls of the stomach may be treated medically but must be carefully followed.

9. The cure-rate of cancer of the stomach can be improved by following these rules.

10. The results of radical surgery for gastric ulcer are excellent and the operative mortality rate is low.

IN MEMORIAM



WILLIAM J. SHELTON, M. D.
1875-1943

Dr. William J. Shelton, Mayfield, one of the most active members of the Graves County Medical Society, was killed instantly in an automobile accident on Christmas Eve, 1943, while engaged in the practice of his profession.

He was graduated from the Louisville School of Medicine in 1902 having previously received his A. B. and B. S. degrees from Huntington, Tennessee, and a literary degree from Valpariso, Indiana, and immediately took postgraduate work in Louisville, Chicago, New York and St. Louis.

He served in World War No. I, in Seventh Battalion, Camp Greenleaf, Chickamauga Park, Georgia, and was commissioned First Lieutenant, Medical Corps, U. S. A.

In 1902 he began the practice of medicine in Pottsville, and in 1903 moved to Hickory Grove, and in 1920 to Mayfield where he practiced until his death. He was a member of the American Medical Association, Southern Medical Association, Kentucky State Medical Association, Graves Medical Society. He was on the staffs of the Mayfield and Fuller-Gilliam Hospitals and was also a member of the Graves County Board of Health. He was orator in Medicine, Kentucky State Medical Association, in 1934. He attended the State Medical Association meeting in 1943, and his wife said he often mentioned the conference he had with Dr. Blackerby regarding health of communities in general.

He was an active leader in church circles and taught the Men's Bible Class for eighteen years. In 1900 he was married to Miss Lillian McGee. The profession mourns the loss of so distinguished a member.

DR. CHARLES ROBERT SLATER

Dr. Charles Robert Slater, of Erlanger, died at the home of his son, Dr. Charles Robert Slater, Jr., in Tampa, Florida, on February 5th, and his body was returned to Erlanger for interment in the Highland Cemetery.

Dr. Slater was born in 1860 and practiced medicine in Erlanger for sixty years. Recognized as one of the most prominent physicians in Northern Kentucky, he was always an exemplar of the "good family physician." As an example of his reputation for service to his people, it is recalled that on the occasion of his Fiftieth Anniversary in practice, the community held a testimonial reception in the Auditorium of the High School, which was filled to its capacity. Among those present were a woman whose birth he had attended forty-nine years before and a baby that he had delivered a few weeks before. Glowing tributes were paid to him by professional and lay friends and he was given a purse of gold in the amount of $300.00 for a vacation trip, something in which he had rarely ever indulged.

Dr. Slater kept abreast of the progress in scientific medicine and had a reputation as an unusually good diagnostician and theraputist.

ISAAC JOHNSON TOWNES, M. D.
1867-1944

Dr. Isaac Johnson Townes, 76, vice-president of Hopkins County Medical Society and practicing physician in Madisonville since the summer of 1905, died suddenly January 22, 1944, in Mayfield, where he and Mrs. Townes were visiting Mrs. Townes' sister, Mrs. William Barron.

Dr. Townes was a member of a family party attending a picture theatre and had just taken his seat when, without uttering a word, he collapsed unconscious and died while being removed to the theatre lobby.

Dr. Townes was born in Sacramento, on April 25, 1867, the son of Dr. Moses Overton Townes and Sallie Johnson Townes. He began

the practice of medicine in Beech Grove in 1889, when he was twenty-one years old and remained there until he moved to Madisonville sixteen years later. He engaged in practice alone here until 1916 when Dr. J. D. Sory, present mayor of Madisonville, was called into the military service with the Kentucky National Guard on a punitive expedition into Mexico.

Dr. Sory, then Hopkins County Health Officer as well as general practitioner, persuaded Dr. Townes to enter his office and assume charge of his practice for the extent of his absence in service. When Dr. Sory returned in March 1917, the two doctors formed a partnership which endured thereafter.

Two weeks after the partnership was formed, however, Dr. Sory was recalled for service in World War One. He went to France and did not return until February 1919.

He was a long time member of Eureka Camp No. 25, Madisonville Woodmen of the World, for which he was medical examiner a great many years. He was a member of Oriental Lodge No. 99, Independent Order of Odd Fellows and of Madisonville Lodge No. 143 Free and Accepted Masons and County Health Medical Societies.

He is the father of Lieut. Colonel Dwight Townes of the army medical corps in San Antonio, Texas.

Had he lived until April 1, Dr. Townes would have been a practicing physician fifty-five years.

W. H. Garnier, M. D.

ASA W. NICKELL, M. D.

Dr. Asa W. Nickell, Louisville, age 66, a practicing physician for thirty-nine years, died of a heart attack in a Starks Building elevator on his way to his office February 15, 1944.

A native of Morgan County, he was on the staff of SS. Mary and Elizabeth Hospital and was a member of the American Medical Association, Southern Medical Association, Jefferson County Medical Society and the Kentucky State Medical Association.

BOOK REVIEWS

HANDBOOK OF NUTRITION: A Symposium Prepared Under the Auspices of the Council on Foods and Nutrition of the American Medical Association. Published by the American Medical Association, 535 North Dearborn Street, Chicago 10. Price $2.50.

The great advances made in the knowledge of the laws regulating the phenomena of nutrition necessitate new books and frequent revisions of the latest pronouncements on that subject. The Journal of the American Medical Association has been publishing a series of outstanding articles on the various aspects of nutrition. But many of them have had to be revised and brought up to date because of new advances in our knowledge and comprehension of this far reaching subject. These have been incorporated and brought up to date in this new book which bears the imprint of the American Medical Association.

It seems invidious to pick out any one of these fine articles for special comment, but the Medical Evaluation of Nutritional Status is fundamental. And here is where there is likely to be some divergence of opinion on an individual case because of judgments that are conditioned by the previous experience and wisdom of the physician. After all it is most important that we establish some standards by which malnutrition can be evaluated, otherwise we shall not know what measures are to be chosen for the correction of that malnutrition.

There is here a wealth of information touching all phases of nutrition that is up to date and authoritative. There being some twenty-eight outstanding contributors, there is no possibility of a narrowed viewpoint or a bias toward some special fad or food which sometimes vitiates the work of even eminent nutritionists.

TRAUMATIC INJURIES OF FACIAL BONES: By John B. Erich, M. S., D. D. S., M. D., Consultant in Laryngology, Oral and Plastic Surgery at the Mayo Clinic, Assistant Professor of Plastic Surgery, The Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota; Diplomate of the American Board of Plastic Surgery; and Louie T. Austin, D. D. S., F. A. C. D., Head of Section on Dental Surgery at the Mayo Clinic. Associate Professor of Dental Surgery, The Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota. In Collaboration with Bureau of Medicine and Surgery, U. S. Navy. 600 pages with 333 illustrations. Philadelphia and London: W. B. Saunders Company, 1944. Price $6.00.

This volume represents a sincere effort to coordinate available knowledge and experience in solving the intricate problems encountered in the management of maxillo-facial injuries and deformities. It will also be of great value to the ordinary practitioner of medicine and will also prove to be a fine guide to the young surgeon who is beginning to work in traumatic and plastic surgery. It is used by naval and army surgeons.

Plastic surgeons are now called upon to treat all defects and deformities encountered in the practice of general surgery and the surgical specialties, in correction of which mastery of the intricacies of plastic procedures is a pre-requisite for the best results. This book is an excellent guide for such problems.

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NEXT ANNUAL MEETING LOUISVILLE 1944

COUNTY SOCIETY REPORTS

Adair: The annual meeting of the Adair County Medical Society was held in Columbia, at which time the following officers were elected: President, W. J. Flowers; Secretary, W. Todd Jeffries.

W. Todd Jeffries, Secretary.

Allen: The annual meeting of the Allen County Medical Society was held at Scottsville, at which time the following officers were elected: President, John W. Meredith; Vice President, A. G. Cosby; Secretary-Treasurer, A. O. Miller; Delegate, John W. Meredith.

A. O. Miller, Secretary.

Boyd: The regular meeting of the Boyd County Medical Society held in the Henry Clay Hotel was called to order at 6:30 P. M. by Proctor Sparks, President. The minutes of the last meeting were read by R. G. Culley in the absence of the secretary and were approved.

Leslie Urban was asked to have charge of the program at the next meeting. He asked the society what phase of x-ray it would like him to discuss. It was suggested that he select the subject of The Indications and Contra Indications of X-ray Diagnosis and Treatment. This was accepted.

The application for membership of Jamie P. Scott with check for $20.00 was received and referred to the Board of Censors.

All bills for flowers amounting to seven dollars and fifty cents were voted paid.

The program was turned over to E. C. McGehee for a discussion on the heart, normal and diseased. He presented a series of recordings on abnormal heart sounds together with their comparison to the normal heart sound. He then gave a lecture on the electrocardiograph and its diagnostic value, illustrating the electrocardiographic recordings of various abnormal heart conditions. Following this program the meeting was adjourned.

The following members of the Boyd County Medical Society are now in the Armed Forces: G. M. Bell, M. D. Garred, J. E. Moore, C. B. Daniels, Clyde C. Sparks, Walter Williams, H. J. Prichard, Richard W. Gardner, H. E. Martin, E. R. Viers, H. J. Stone, C. C. Woods, and O. H. Fearing.

Price Sewell, Jr., Secretary

Campbell-Kenton: The regular monthly meeting of the Campbell-Kenton County Medical Society was held at St. Elizabeth Hospital on February 3, 1944 with twenty-five members and five guests present. The meeting was called to order at 9:00 P. M. by the president, O. W. Frickman. The minutes of the previous meeting were read and approved.

The following communications were receiv-

ed: Letters from the Kentucky State Medical Association relative to two articles by Charles Reynolds which he wishes published in the State Journal. On motion of C. N. Heisel, the articles are to be referred to committee which is to report at the next meeting.

A letter from Mrs. Luther Bach thanking the society for the three hundred dollars allowed to entertain the ladies of the Southern Medical Association. A check for $47.56 was also enclosed which represents the unused balance returned to the society.

A letter of thanks from the American Society of Tropical Medicine. A letter from Mr. Wm. S. Rudd correcting the name of our health and accident policies from the Kenton-Campbell to the Campbell-Kenton County Medical Society. The original letter from the Commercial Casualty Insurance Company is on file.

A Christmas card from Major Clements W. Air was received.

The application of Dr. Emily Hess was read and referred to the Board of Censors.

The courtesy of the floor was extended to Mr. Lorenz of the Southern Medical Association who thanked the society for their past hospitality and expressed hope that we would invite them again in the not too distant future.

The paper of the evening consisted of an excellent presentation of the Rh Factor as related to blood transfusion and erythroblastosis foetalis by Dr. Wm. McKee German.

The paper was discussed by Drs. Thompson, Mersch, Van Dermark, J. Molony, Miner, and Binkley.

There being no further business, the meeting was adjourned.

R. L. Biltz, Secretary.

Henry: The Henry County Medical Society held its regular monthly meeting at the Castle Hotel, New Castle, Kentucky on Tuesday, January 11, 1944 at 7:30 p. m.

Members present were: J. C. Hartman, O. P. Chapman, F. D. Hancock, Maurice Bell, Otto Cubbage, R. J. Skidmore, J. L. Karnes, W. W. Leslie, W. B. Oldham, A. G. Elliston, W. F. Carter and Owen Carroll.

Guests present were: Dr. LaMarr Neblett, Louisville, guest speaker and Mrs. J. C. Hartman, Miss Tommie Hartman, Mrs. F. D. Hancock, Mrs. Maurice Bell, Mrs. Otto Cubbage, Mrs. W. F. Carter, Mrs. W. W. Leslie, Mrs. J. L. Karnes, Mrs. R. J. Skidmore, Mrs. A. G. Elliston.

Maurice Bell asked the blessing and then a very delicious dinner was served.

In the absence of the President, J. C. Hartman, the Vice-President presided.

The minutes of the last meeting were read and approved as read.

The Secretary read a letter from the F. S. H. A., stating it would discontinue the Group Medical Association as of January 1, 1944, which was agreed by the Society.

The following officers were elected for the year 1944: President, J. C. Hartman, Campbellsburg, Vice-President, F. D. Hancock, Sulphur and Secretary, Owen Carroll, New Castle.

J. C. Hartman was elected delegate for the State Medical Association, and W. W. Leslie alternate.

Drs. Maurice Bell, W. B. Oldham and W. F. Carter were elected Censors.

The meeting was then turned over to J. C. Hartman, host for the evening, who introduced LaMar Neblett, speaker for the meeting. Dr. Neblett read a paper on Obstruction of the Gall Ducts, which was very interesting and was discussed freely by most of the members present.

It was noted that J. L. Karnes will be host for the February meeting.

There being no further business, the meeting adjourned to meet the second Tuesday in February.

Owen Carroll, Secretary

Hopkins: A regular meeting of the Hopkins County Medical Society was held at the Hospital at 7 P. M., February 10, 1944.

Minutes of the last meeting were read and approved.

A card of thanks was received from the family of I. J. Townes for flowers sent by the Society during their recent bereavement.

J. D. Sory was elected vice-president to fill out I. J. Townes' unexpired term.

The feature of the meeting was a technicolor movie on communicable diseases and dealing with syphilis. This was presented by Mr. Van Roberts of the State Health Department and Mr. George Hunt, State Sanitary Inspector.

In attendance were: Drs. Johnson, Moore, Morton, Finley, Strother, Sory, Morse, Corum and Garnier, and Messrs. Roberts, Hunt and Goodman.

Wm. H. Garnier, Secretary.

Jefferson: The 873rd stated meeting of the Jefferson County Medical Society was held Monday evening, January 3, with 29 members present for the business session.

At 8:15 P. M., the President called the meet- to order and Dr. George F. Dwyer gave his case report on "Neurosarcoma of the Stomach." Dr. Harry M. Weeter showed the specimen and described it.

The Secretary read the minutes of the previous meeting which were approved as read.

The Secretary read a letter to Dr. Smock from Colonel Morris C. Thomas, Commanding Officer at the Station Hospital at Fort Knox, requesting suggestions for hospital care of civi-

lian patients in Louisville hospitals, some emergency patients injured on the highway near Ft. Knox and taken to the station hospital, others not emergency but requiring hospital care.

J. G. Sherrill suggested that a committee be selected to take up the matter with the Colonel to make necessary arrangements. The matter was referred to the Society for action and consideration. The letters from Fort Knox were given to the Chairman of the Economics Committee at one of the meetings but, up to the present time, no report has been made concerning this situation.

Motion was made, seconded and passed that three men be named to meet with the Economics Committee to study this matter.

The President named Drs. M. G. Buckles, C. H. Maguire and H. M. Weeter, chairman, to serve on this committee.

H. M. Weeter of the Program Committee spoke of the difficulty of securing men to take part on the program under the "two-year exclusion act." He would like to have a motion that the by-laws be amended or that this part be suspended until after the war. This was submitted in writing. He announced that the Annual Meeting will be at the Pendennis Club January 17.

The Secretary said several members thought the matter of a quorum might be brought before the Society, in view of the fact that in the past six months there have been delays until eight-thirty or so until a quorum was present. He thought it would be a good thing to change the number required for a quorum so that the business session could begin on time, perhaps lowering the quorum from 25 to 20 or 18.

Oscar Bloch, Jr., suggested that it might be better to make an adjustable quorum, on a percentage basis of the total membership, e. g. one-twentieth of the total membership. This was submitted in writing.

R. A. Bate of the Necrology Committee read reports on the deaths of Drs. C. F. Weidner and J. F. Cook, with the members standing in tribute.

New members elected are: Ellis O. Coleman, Albert S. Irving, Bruce B. Mitchell, Elliott Podoll and William J. Temple. Dr. J. Paul Keith was elected to associate membership.

Scientific Program: 9:05 P. M.

Essay: "Treatment of Carcinoma of the Prostate." Lytle Atherton, M. D.

Discussed by Doctors R. A. Bate, Misch Casper, Harry M. Weeter, J. G. Sherrill, Oscar Bloch, Jr., Herman Mahaffey and W. H. Woodson, with closing remarks by the essayist. The meeting adjourned at 10:05 P. M.

Herman Mahaffey, Secretary.

Letcher: The annual meeting of the Letcher County Medical Society was held in Whitesburg, at which time the following officers were elected: President, T. M. Perry; Vice President, J. E. Crawford; Secretary-Treasurer, Owen Pigman.

Owen Pigman, Secretary

Lewis: The annual meeting of the Lewis County Medical Society was held in Vanceburg, at which time the following officers were elected: President, H. M. Bertram; Vice President, C. C. Merritt; Secretary, E. Esham; Delegate, T. B. Ginn.

E. Esham, Secretary

Owsley: The annual meeting of the Owsley County Medical Society was held in Booneville, at which time the following officers were elected: President, W. E. Becknell; Vice President, M. B. Gabbard; Secretary-Treasurer, W. H. Gibson; Delegate, M. B. Gabbard.

W. H. Gibson, Secretary

Pike: The annual meeting of the Pike County Medical Society was held in Pikeville, at which time the following officers were elected: President, W. D. Damron; Vice President, M. D. Flanary; Secretary-Treasurer, S. B. Casebolt.

S. B. Casebolt, Secretary

Scott: The regular monthly meeting of the Scott County Medical Society was held at the John Graves Ford Memorial Hospital, Thursday, February 3, 1944, with the following members present: Heath, Crutchfield, Ammerson, Allphin, Barlow, Roberts, Smith and Johnson. Captain Jewell of the U.S.P.H.S., Acting Health Officer for Scott County and Dr. Ernest Bradley of Lexington. Minutes of the previous meeting were read and approved.

After a delicious dinner served by the Hospital, an interesting talk was delivered by Dr. Ernest Bradley on the subject of Diabetes which was followed by a round table discussion. There being no further business the meeting adjourned to meet again the first Thursday in March.

H. V. Johnson, Secretary.

Shelby: The annual meeting of the Shelby County Medical Society was held in Shelbyville, at which time the following officers were elected: President, H. B. Blaydes: Vice President, G. F. McMunn; Secretary-Treasurer, C. C. Risk; Delegate, A. C. Weakley; Board of Censors; W. E. Morris, Lister Collins and W. H. Nash.

C. C. Risk, Secretary

Taylor: The annual meeting of the Taylor County Medical Society was held in Campbellsville, at which time the following officers were elected: President, F. I. Buckner; Vice President, C. V. Heistand; Secretary, L. S. Hall.

L. S. Hall, Secretary

Trigg: The annual meeting of the Trigg County Medical Society was held in Cadiz, at which time the following officers were elected: President, B. E. Hatcher; Vice President, John White; Secretary, Elias Futrell; Treasurer, N. C. Magraw; Delegate, H. L. Wallace.

Elias Futrell, Secretary

Union: The Union County Medico-Dental Society met at the home of Dr. Darrell L. Vaughn in Morganfield, at 7:00 P. M. Tuesday, February 1, 1944. Dr. and Mrs. Vaughn invited the Society as their guests and served a very excellent meal with country ham, fried chicken and all the trimmings. After this fine meal a motion picture about oil and its products was shown, followed by a film on "Appendicitis in Children." Both films were excellent and were enjoyed by all present.

Those present were: C. B. Graves, H. B. Stewart, J. W. Conway, C. I. Harris, C. P. Cottingham, Sam Goldstein, Rudy Ruark, W. H. Puryear, D. L. Vaughn, Mr. Robert Clark, Leslie Hardesty, J. F. Whitsell, A. L. Bailey. J. N. Whitsell, Bruce Underwood.

Bruce Underwood, Secretary.

Warren-Edmonson: The annual meeting of the Warren-Edmonson County Medical Society was held in Bowling Green, at which time the following officers were elected: President, Finis London; Vice President, Eldon W. Stone, Secretary-Treasurer, Paul Q. Peterson.

Paul Q. Peterson, Secretary

Washington: The annual meeting of the Washington County Medical Society was held in Springfield, at which time the following officers were elected: President, J. C. Mudd; Vice President, M. A. Coyle; Secretary-Treasurer, J. H. Hopper.

J. H. Hopper, Secretary.

NEWS ITEMS

E. E. Camp, M. D., Russellville, received his commission in November, 1943, went to Carlisle, Pa., for basic training, and is now stationed in some military camp in Florida.

The Senate confirmed on February 16, 1944, appointment by Governor Simeon Willis, December 23, 1943, of Dr. George S. Coon and Clarence Davis of Louisville as members of the State Board of Health.

Dr. Oscar Bloch, Jr., announces a change of office to Suite 414-415 Fincastle Building, Third and Broadway, Louisville. Practice limited to Internal Medicine. Hours 8:30 a. m. to Noon, by appointment. Telephones: Office, JAckson 1668; Home, HIghland 6366.

Lieutenant Col. A. Clayton McCarty, Louisville, who was stationed in Nashville, is now at an embarkation camp.

Dr. Philip J. Noel, Jr., Bowling Green, has been promoted to Major in the Medical Corps. He was graduated from the University of Louisville Medical School in 1941, and interned at the Walter Reed Hospital. Later at Carlisle Barrack, Pennsylvania, he was graduated from the U. S. Army Medical Field Service School. While an Instructor at Carlisle Barracks he was commissioned Captain. He was then transferred to the Medical Corps, Camp Bowie, Texas, and on January 26, 1944 he received his commission as Major. He has now gone into foreign service.

Major Noel's father, Colonel Philip J. Noel, Bowling Green, is a Veteran of the Spanish American War.

Major J. Keller Mack, Louisville, who was stationed at Bowman Field, is now in Washington, D. C., where he is in the office of the surgeon general.

Lt. Col. R. Glen Spurling, Louisville, has been assigned for overseas duty as senior consultant on headquarters staff in neurological surgery in the European theater of war. Col. Spurling is the author of several books on Brain and Allied Surgery and has been stationed at Walter Reed Hospital, Washington.

Dr. Wilson S. F. Dodd, Berea, Medical Director of the Near East Foundation has charge of a tent city housing 45,000 evacuees from German occupied Yugoslavia, which is situated at El Shatt.

Dr. Manuel Blanco Cervantes, State Commissioner of Health, San Jose, Costa Rica was a visitor to the Kentucky State Board of Health. Dr. Cervantes is studying Public Health in the United States under the auspices of the Rockefeller Foundation.

Nurse Shortage: To meet the growing war needs for nurses America will need 395,000 nurses next year; 100,000 more than are available. Of this number 66,000 would go to military services and 293,000 to civilian practice according to the U. S. P. H. Service. Increased war production has jumped industrial accidents to an estimated 2,500,000.



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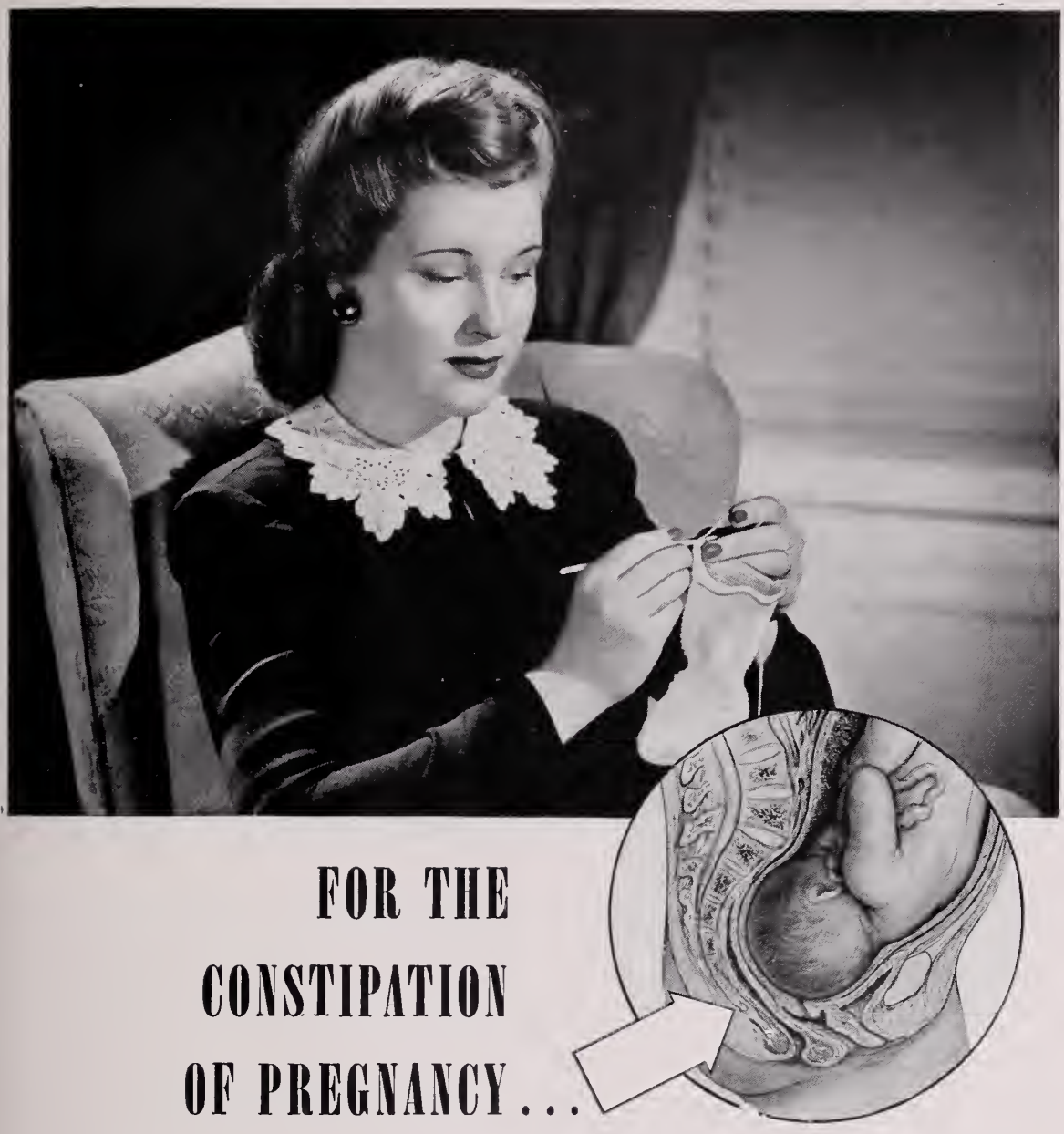
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2. During the early months of life the infant obtains very little iron from milk — 1.44 mg. per day from the average bottle formula of 20 ounces or possibly 1.7 mg. per day from 28 ounces of breast milk. (Halt,[5] Jeans[3]). The incidence of nutritional anemia has been found to be high among infants confined largely to a diet of cow's milk. (Davidson, et al.[6] Usher, et al.,[4] Mackay[1]).

For these reasons and also because of the low hemoglobin values so frequent among pregnant and nursing mothers (Strauss,[7] and Gottlieb and Strean[8]), the pediatric trend is constantly toward the addition of iron-containing foods at an early age, both to normal infants and those with pylaraspasm. (Neff,[9] Blatt,[10] Brennemann,[11] Monypenny[12]).

THE CHOICE OF THE IRON-CONTAINING FOOD

1. Many foods high in iron actually add very little to the diet because much of the mineral is lost in cooking or because the amount fed is necessarily small or because the food has a high percentage of water. Strained spinach, for instance, contains only 1 to 1.4 mg. of iron per 100 Gm. (Bridges[13]).

2. To be effective, food iron should be soluble. Some foods fairly high in total iron are low in soluble iron. Thus egg yolk and liver have less soluble iron than does farina, which is very low in total iron. (Summerfeldt[14]). Oxalate-containing leafy vegetables are low in soluble iron and appear not to be well utilized as a source of iron by infants. (Kohler, et al.,[15] and Stearns[16]).

3. **Pablum (and Pabena) are high both in total iron (30 mg. per 100 Gm.) and soluble iron (7.8 mg. per 100 Gm.) and can be fed in significant amounts at an early age, without digestive upsets. (Blatt,[10] Monypenny[12]). Clinical studies of sick and well babies have shown Pablum to be of value in raising hemoglobin values (Crimm, et al.,[17] Summerfeldt and Ross[18]), even when egg yolk and spinach were not effective (Stearns[16]).**

Pablum, a palatable mixed cereal food, vitamin and mineral enriched, and cooked thoroughly and dried, consists of wheatmeal (farina), oatmeal, wheat embryo, cornmeal, powdered beef bone, sodium chloride, alfalfa leaf, brewers' yeast, and reduced iron. (The oatmeal form of Pablum is called Pabena.)

[1-18] **Bibliography on request.**

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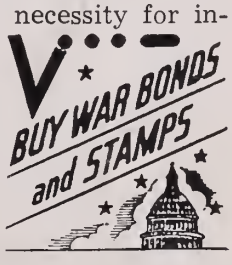
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Part I deals with the Physiology of the entire endocrine system. It takes up each endocrine gland separately. *Part II* deals entirely with the symptoms and conditions that arise from dysfunction, and with their diagnosis and treatment. Yes, *Treatment* is a vital part of this book and there is page after page devoted to therapeutics, including complete information on hormone preparations. Not only does Dr. Hoffman evaluate all treatment and agents, but he tells what treatment is indicated and why, stresses limitations of endocrine therapy and why it can't be used in certain instances. He puts special emphasis on *non-endocrine therapy,* points out the necessity for intelligent psychic management, and ties in closely the constitutional aspects and non-endocrine factors of endocrine dysfunctions.

Part III is the section on Laboratory Work, giving laboratory diagnostic aids that will prove valuable in determining just what is wrong and what can and should be done.



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COUNTY	SECRETARY	RESIDENCE	DATE
Adair	W. Todd Jefferies	Columbia	April 5
Allen	A. O. Miller	Scottsville	April 26
Anderson	J. B. Lyen	Lawrenceburg	April 3
Ballard	F. H. Russell	Wickliffe	
Barren	C. R. Markwood	Glasgow	April 19
Bath	H. S. Gilmore	Owingsville	April 10
Bell	Edward S. Wilson	Pineville	April 14
Boone	R. E. Ryle	Walton	April 19
Bourbon	George M. Jewell	Paris	April 20
Boyd	Price Sewell, Jr.	Ashland	April 4
Boyle	P. C. Sanders	Danville	April 18
Bracken-Pendleton	W. A. McKenney	Falmouth	April 27
Breathitt	M. E. Hoge	Jackson	April 18
Breckinridge	J. E. Kincheloe	Hardinsburg	
Bullitt	George B. Hill	Mt. Washington	
Butler	D. G. Miller, Jr.	Morgantown	April 5
Caldwell	W. L. Cash	Princeton	April 11
Calloway	J. A. Outland	Murray	April 6
Campbell-Kenton	Robert L. Biltz	Newport	April 6
Carlisle	E. E. Smith	Bardwell	April 4
Carroll	H. Carl Boylen	Carrollton	April 11
Carter	Don E. Wilder	Grayson	April 11
Casey	Wm. J. Sweeney	Liberty	April 27
Christian	H. B. Stone	Hopkinsville	April 18
Clark	W. Carl Grant	Winchester	April 21
Clay	L. H. Wagers	Manchester	April 11
Clinton	S. F. Stephenson	Albany	April 15
Crittenden	C. G. Moreland	Marion	April 10
Cumberland	W. F. Owsley	Burkesville	April 5
Daviess	Frank J. Condon	Owensboro	April 11 &25
Estill	Virginia Wallace	Irvine	April 12
Fayette	Charles D. Cawood	Lexington	April 11
Fleming	Roy Orsburn	Flemingsburg	April 12
Floyd	Robert Sirkle	Weeksbury	April 26
Franklin	E. K. Martin	Frankfort	April 6
Fulton	John G. Samuels	Hickman	April 12
Gallatin	J. M. Stallard	Sparta	April 20
Garrard	J. E. Edwards	Lancaster	April 20
Grant	Wallace Byrd	Williamstown	April 19
Graves	H. H. Hunt	Mayfield	April 4
Grayson	E. B. Deweese	Caneyville	
Green	S. J. Simmons	Greensburg	April 3
Greenup	Virgil Skaggs	Russell	April 14
Hancock	F. M. Griffin	Hawesville	April 3
Hardin	D. E. McClure	Elizabethtown	April 13
Harlan	W. R. Parks	Harlan	April 15
Harrison	W. B. Moore	Cynthiana	April 3
Hart	Vinson Corrao	Munfordville	April 4
Henderson	Walter L. O'Nan	Henderson	April 10 & 24
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Lawrence	L. S. Hayes	Louisa	April 17
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Letcher	Owen Pigman	Whitesburg	April 25
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Livingston	T. L. Radcliffe	Smithland	
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Lyon	H. H. Woodson	Eddyville	April 4
McCracken	Leon Higdon	Paducah	April 26
McCreary	R. M. Smith	Stearns	April 3
McLean	F. L. Johnson	Livermore	April 13
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Magoffin	Lloyd M. Hall	Salyersville	
Marion	Nelson D. Widmer	Lebanon	April 26
Marshall	S. L. Henson	Benton	April 19

COUNTY	SECRETARY	RESIDENCE	DATE
Mason	C. W. Christine	Maysville	April 12
Menifee	E. T. Riley	Frenchburg	
Mercer	J. Tom Price	Harrodsburg	April 11
Metcalfe	E. S. Dunham	Edmonton	
Monroe	Geo. E. Bushong	Tompkinsville	
Montgomery	D. H. Bush	Mt. Sterling	April 11
Muhlenberg	E. L. Gates	Greenville	April 11
Nelson	Keith Crume	Bardstown	
Nicholas	T. P. Scott	Carlisle	April 17
Ohio	Oscar Allen	McHenry	April 5
Owen	K. S. McBee	Owenton	April 6
Owsley	W. H. Gibson	Booneville	April 3
Perry	J. P. Boggs	Hazard	April 10
Pike	S. B. Casebolt	Pikeville	April 6
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Taylor	L. S. Hall	Campbellsville	April 6
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Trigg	Elias Futrell	Cadiz	April 11
Union	E. Bruce Underwood	Morganfield	April 4
Warren-Edmonson	Paul Q. Peterson	Bowling Green	April 12
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Wayne	Frank L. Duncan	Monticello	
Webster	C. M. Smith	Dixon	April 28
Whitley	C. A. Moss	Williamsburg	
Wolfe	John L. Cox	Campton	April 3
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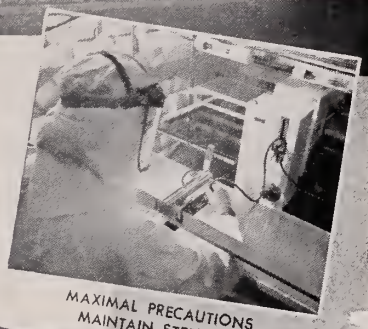
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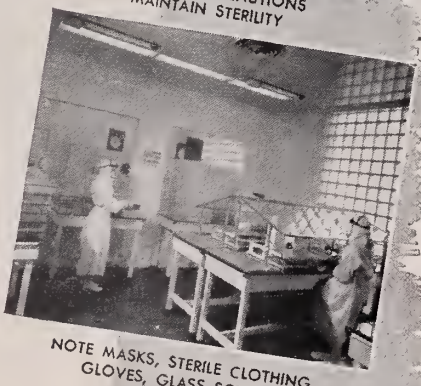
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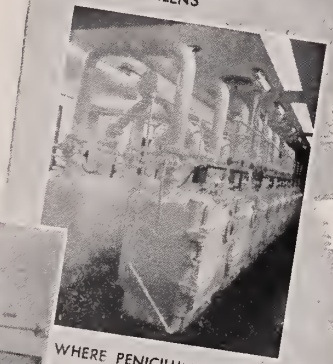
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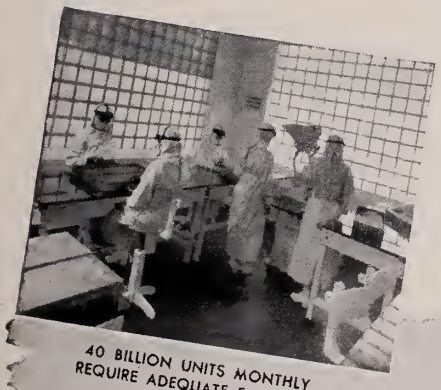
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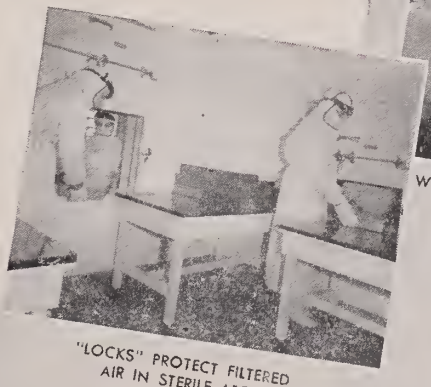
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KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

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PAY YOUR DUES

This is the last issue of the JOURNAL which you will receive if you have neglected to pay your dues by the end of the current month.

The postal authorities require deletion from the subscription list of the names of all physicians whose dues are delinquent on April First.

It should also be remembered that the Constitution and By-Laws of the Association provide that only members in good standing as of this date are entitled to the Medico-Legal services of the Association in case of need.

HOSPITAL INSURANCE PLANS

The Committee on Medical Economics of the Jefferson County Medical Society, in discussing the extension of hospital insurance plans, in its report at the Annual Meeting in January, which was unanimously approved, emphasized the fact that there is a tendency to broaden the service to include, along with hospitalization, certain types of medical services. The Committee, in referring to hospital insurance on a national scale (Blue Cross Plan), stated, in part, as follows:

"The national hospital group has made clear its objective in the following language: 'The patient, whatever his economic status, is entitled to receive the necessary service of the clinician, the surgeon, the pathologist, the radiologist, the nurse and the lay people who attend him. All these services are part of the hospital.' Quoting again, listen to the following: 'The hospital is an indispensable public utility because of the wide variety of the diagnosis and treatment it offers.'

"The medical profession stands today between two agencies that are bidding for control of professional service; on the one hand, a merchandising expediency that would govern the services of the medical profession—hospital catch-phrase, and, on the other, a paternalistic federal agency that likewise puts the layman in control of professional service. But, in either case, we become merely a class of skilled laborers, hired and fired at will.

"We present these statements as a view of the national situation.

"As the local situation is viewed by your committee, we think that electrocardiographic service is, beyond its purely technical features, professionally diagnostic and must be interpreted by a physician. If a hospital proposes to sell such service, it must carry with it a physician's interpretation and to get that the hospital must hire it. Then to sell it, is selling the doctor's service along with purely hospital tests.

"Your committee believes that the local hospital service has no present intention of selling professional services if the profession properly objects, but we do think that it is wise to direct tendencies.

"If the Louisville Community Hospital Service can afford to give more than it is now giving for what the subscriber pays, there are ways to encompass that justice. Ambulance service is one that comes to mind readily."

ASSOCIATION LIBRARY FACILITIES

At a recent meeting of the Council, the Chairman called attention to the need of having at State Headquarters some designated space for keeping records, Journals and books of historic value to the medical profession. It was agreed that, since in the Annex to the State Board of Health Building there is a room set apart for library purposes, requests be made for cabinet space in this library for the use of the State Medical Association to file such records. This has now been arranged and the attention of the doctors of the State is called to the importance of advising the Secretary of the Association of any knowledge they might have of valuable historical records. It is not intended to make the space available for other than

books, Journals and valuable records. The Doctor's Shop at Danville is available for any other material.

There are already stored in the library bound volumes of Journals of the American Medical Association for the year 1894 and from 1906 through 1943; old transactions of the Kentucky State Medical Society, including the first meeting in 1851 and through to 1856, and from 1890 to 1898 and 1900 to 1902; bound volumes of the Kentucky Medical Journal from 1903 through 1943; bound volumes of the Journal of the Southern Medical Association from 1920 through 1943, along with other valuable medical and public health books and journals.

AN IMPORTANT ANNOUNCEMENT

The House of Delegates of the State Medical Association, at its Annual Meeting, authorized the Council to fix a date and place of meeting other than Louisville, if conditions warranted such action. The Council learned that the usual accommodations for the State Meeting were not possible for this year, due to the hotels being constantly crowded, a threatened labor shortage and lack of other necessary facilities. The Council, therefore, has unanimously voted to accept the invitation of the Fayette County Medical Society to hold the meeting in Lexington this year and the dates will be September 18, 19 and 20th.

Lexington has always had the reputation of providing the very best in hospitality and entertainment and the members may justifiably look forward to a good meeting. It is hoped that a large number will be able to attend.

CURRENT COMMENTS

Physical restoration for the handicapped, so that they may as nearly as possible approximate normal capacity, was called the basic need in vocational rehabilitation by Federal Security Administrator Paul V. McNutt at the first meeting of the Professional Advisory Committee of the Office of Vocational Rehabilitation held in Washington, March 3.

The committee, made up of 20 specialists in medical and allied fields, was appointed by Administrator McNutt to provide professional guidance in mapping the new State-Federal program for medical and surgical care under the Braden-LaFollette Act.

The committee is making recommendations for the advice of State Rehabilitation Agencies in the following areas of operation: the scope of physical restoration services; professional standards of physicians, hospitals and other facilities providing services under State programs; auxiliary services in the fields of medical-social work, nursing, psychiatric social work, and physical therapy; and definition of the policies and plans of various groups of disabilities.

The American Medical Association is represented on the Committee by Dr. Victor Johnson, Secretary, Council on Medical Education and Hospitals; Dr. John S. Coulter, Member of Council on Physical Therapy; and, Drs. W. D. Stroud and Carl M. Peterson of the Council on Industrial Health.

The War Production Board has released for publication in April a statement calling attention to the "National Waste Paper Salvage Program," and included in this is a request to civilian hospitals to join in both conservation and salvage of paper to meet the vital needs faced in this country. The request is as follows:

"The active help of every hospital in the program should consist of:

(1) Avoiding waste in the use of paper.

(2) Salvaging waste paper and returning it to use. Today, the War Production Board regional offices throughout the country are asking for the cooperation of every hospital, every doctor, every medical and dental unit in the scrap paper program. They are asked to dispose of books, magazines, newspapers, records, wrappings, cartons, advertising literature and bulletins. They are asked to ferret out every last scrap or shred of paper to go into the salvage paper drive.

Contract with a salvage dealer to collect, handle and dispose of all the hospital's salvage at regular intervals.

(1) Appoint and hold responsible some member of the hospital personnel to head and correlate the paper salvage program.

(2) Take immediate steps to scrap old records by using the microfilm process.

(3) Publicize the waste paper drive with bulletins or posters in every department, with short talks and appeals to staff personnel.

(4) Set up a system of waste paper collection with every possible source of waste paper checked at regular intervals."

This urgent appeal should be kept in mind by physicians in connection with their own use of paper and conservation of waste paper, and it is hoped they will use their good influence with hospitals or other agencies with which they deal.

ORIGINAL ARTICLES

BACILLARY DYSENTERY

E. L. Turner, M. D.
Nashville, Tenn.

This subject of the dysenteries is not a new one, and as evidence of that I quote to you from the works of Hippocrates, Of the Epidemics, "And many and serious complaints attacked many persons in the region of the belly. In the first place, tenesmus, accompanied with pain, attacked many, but more especially children, and all who had not attained to puberty; and the most of these died. There were many cases of lientery and of dysentery; but these were not attended with much pain. The evacuations were bilious, and fatty, and thin, and watery; in many instances the disease terminated in this way, with and without fever; there were painful tormina and volvuli of a malignant kind; copious evacuations of the contents of the guts, and yet much remained behind; and the passages did not carry off the pains, but yielded with difficulty to the means administered; for in most cases purgings were hurtful to those affected in this manner; many died speedily, but in many others they held out longer. In a word, all died, both those who had acute attacks and those who had chronic, most especially from affections of the belly, for it was the belly which carried them all off.

"All persons had an aversion to food in all the afore mentioned complaints to a degree such as I never met with before, and persons in these complaints most especially, and those recovering from them, and in all other diseases of a mortal nature. Some were troubled with thirst, and some not; and both in febrile complaints and in others no one drank unseasonably or disobeyed injunctions."

The borderline between some of the diarrheas and dysenteries is a very narrow one. The outline I shall give you is mainly from Manson-Bahr.

The principal forms of dysentery fall into three and possibly four classes. The first great classification of dysenteries is bacillary and in this group we include Bacterial dysenteries, the Shiga, Flexner, and Sonne groups, and the multitude of types we find under these various groupings, especially the Flexner.

The group of the protozoal dysenteries is a rather large group. We have first amebiasis which you are all familiar with. There we get amebic dysentery and its various complications, the result of infection from endamoeba histolytica. We also have the balantidial dysenteries, and I want to include a few others under the heading of protozoal dysenteries. You will find very often when you are working in areas where malaria is endemic that there is a very vicious dysentery associated with certain forms of malaria. Those of you in uniform who are going abroad and who may be in certain parts of the world are going to run across dysentery associated with the visceral form of leishmanial infections, the disease known as kala-azar or dumdum fever, a condition where at least twenty-five per cent of your patients will have a rather serious and sometimes fatal dysentery if it is not taken care of.

Then there are intestinal coccidiosis infections which also can produce dysenteric symptoms.

In the third group, the helminthic group, the most important of the causes of dysentery are Schistosomal infections.

I simply want to state that I saw two cases of schistosomiasis in Tennessee two weeks ago, brought back from the Near and Far East, so that is going to be something that all of us need to be aware of and keep in our minds.

Under this helminthic group there are a few other organisms that may cause dysentery. One of them is the Oesophagostoma brumpti, another the gastrodiscus hominus.

You are all familiar with the fact that we have a group of dysenteries that come under the heading of flagellate diarrheas or flagellate dysenteries. It is my feeling that these are not primary causes of dysentery, that when we have a dysentery associated with them it is the result of something beforehand which paves the way for either giardia or trichomonas or something of that kind.

That, briefly, is the outline of the group and the general classification of the dysenteries.

Classification of the dysenteries, especially the bacterial dysenteries, has also been made on the basis of their agglutinin reactions.

From the standpoint of the Army and from the standpoint of the military surgeon, bacillary dysentery is one of the very important problems that the military surgeon is going to run into. It has been one of the outstanding problems of

Read before the Kentucky State Medical Association, Louisville, October 4, 5, 6, 1943.

wars ever since history began. You can go back to Ebers papyrus in 1600 B. C. and find that bacillary dysentery was a real problem, especially associated with military invasions and actions. You will find that Herodotus describes dysentery outbreaks in the Persian army.

Dysentery has been known in India since remote times, and it has always been a real problem during periods of war. We know that Napoleon's army was almost decimated when he made his trek back from Moscow many years ago. We know that dysentery was one of the most horrible of the problems in the Crimean War. In our own War between the States we have on record that there were at least 285,000 cases of dysentery in the Northern Army alone. I do not know what the records are for the Southern Army, because I have never been able to find them. It was a very serious problem in the Franco-Prussian War; it was a serious problem in the South African War; it was one of the big problems of the Russo-Japanese War.

Coming down to more modern times, it was probably dysentery that caused most of the trouble for the British on Gallipoli. There were at least a hundred thousand casualties that were directly traceable to bacillary dysentery infection in the Gallipoli area during the last war, and undoubtedly it was bacillary dysentery rather than the Germans and the Turks that got the best of the British in that area.

During recent years we have had a number of outbreaks of bacillary dysentery all over the world. Some of them have been very mild, others have been very severe. Our own Army statistics are very interesting and give a little highlight on this problem of bacillary dysentery. A few years ago, Callender worked out the figures for the incidence of dysentery in our American Army. In 1897, the incidence of dysentery was about 72 per 1000; in 1898 we went to war with Spain and the dysentery problem increased, and in 1898 we had about 400 cases per 1000. In 1900 we got into the Philippines and then the dysentery problem increased still more so that we had a rate of about 482 per thousand. In 1915, after a fairly long period of peace and quiet, the incidence of bacillary dysentery in our Army had fallen until there were about 40 per thousand compared to 482 back in 1900. In 1916 we got tied up in a little problem on the Mexican Border. When our soldiers went down there the incidence of dysentery rose again to about 87 per thousand from a rate of 40 in the peace years before.

It is rather interesting that in our own Army the dysentery problem did not increase during the last war. As a matter of fact, in Western Europe dysentery was not one of the big problems of the last war.

Following the last war the incidence of dysentery in the Army fell to about 20 per thousand, a very low figure. Then in 1940 we began to develop a larger Army, we began to group men together and our Army incidence of dysentery rose again to about 37 per thousand.

We know very well that this problem of bacillary dysentery is one that affects especially institutions. In peacetimes we find that our worst outbreaks in civil life are in insane asylums, orphanges and public institutions of various kinds. We find it in barracks, among soldiers. It has been very interesting to tie up this dysentery problem with crowding, with housing where the conditions are not always of the very best.

Weil, in the January 1943 issue of the Journal of Immunology, gives a very interesting review of bacillary dysentery. He points out that bacillary dysentery in general is increasing in this country. Due to our better sanitation, hygiene, and things of that kind, due to our better milk control and sewage control and our inoculation program, typhoid has gone down and down and down, but the dysenteries have gone up, not because there is more dysentery today, but I believe we have learned to diagnose these dysenteries and we have learned to put the so-called unclassified diarrheas and dysenteries into more specific classifications, and as a result our incidence has increased.

These are figures taken from about twenty-one states. In the United States, the high mortality rate from dysenteries is in children. In Maryland, 14.3 per cent of all the deaths under one year of age are due to dysentery. In North Carolina, diarrhea and enteritis rank next to prematurity as the greatest cause of infant death.

Hygienic conditions are very important when it comes to this problem. They are much more important than geographical problems. The mode of spread of bacillary dysentery is definitely somewhat like that of typhoid and paratyphoid. Dysentery bacilli are ingested in food or water that has been contaminated usually by flies. The dysentery bacillus, it has been defi-

nitely shown, can live for days in the intestinal tract of the fly. Personal cleanliness is another very real factor. There is a very good example of that illustrated in one little outbreak in one of our Army camps. A soldier returned to his barracks from a furlough and shortly after he returned there was an outbreak of bacillary dysentery. Before it was over, there were eighty-six cases in his own regiment, and about forty-nine of these were in his own squadron.

The Medical Corps, in endeavoring to run this down, traced the spread of the infection to the latrines and the epidemic was definitely controlled by enforcing rigid rules of cleanliness and demanding, for one thing, that the men all wash their hands when they leave the latrine.

As far as general practice is concerned for purposes of diagnosis and treatment, and this is something that you and I in general practice should keep in mind, it is sufficiently satisfactory to separate the important dysentery bacilli into two groups: First, the Shiga type, or the true dysenteriae and Shiga groups which produce no acid in mannite media and do not form indol. Second, there is the large group of para-dysenteriae, the Shigella-Flexner, Flexner, Hiss (Y), Strong and others, which produce acid in mannite and which form indol.

One other brief word regarding these organisms. Dysentery bacilli are non-motile; they are non-spore-bearing; they are gram-negative organisms. They resemble our typhoid colon group, and on ordinary media they grow very much like them except that the colonies are more moist and a little more sticky and slimy.

As far as the general pathology is concerned bacillary dysentery involves the large intestine. It can in severe cases involve part of the small intestines, mainly the lower two or three feet.

The findings at autopsy are exceedingly variable. In some of the severe cases, the most toxic forms of dysentery, especially those with the Shiga organisms, at death no ulceration at all, and I should like to emphasize that again, that there may actually be no ulceration at all in the large intestine of a severe, acute Shiga dysentery. The patient does not have time to form ulcers. He is carried off so fast. If he survived a little longer he certainly would develop them.

In some of the cases the submucous layer and the muscularis of the intestines are very edematous and swollen; the vessels are all highly injected, and there may be a good bit of fibrin, many fibrin flocculi over the mucosal surface. You may find a superficial layer of a necrotic material; there will be a lot of red blood corpuscles, polymorphonuclears and epithelial cells, with large swollen macrophages and a good many bacteria mixed up in this necrotic layer. Many times there are small diffuse mucosal hemorrhages. Sometimes you will see swollen and raised red, solitary follicles, and sometimes the mesocolic glands adjacent to the large intestine are enlarged. In more advanced cases that have not been so toxic, that have survived longer, you will find ulceration, and the ulcerations of bacillary dysentery are rather different from the ulcerations you find in the dysenteries of amebiasis or in the dysenteries of balantidial infections. These ulcerations of bacillary dysentery tend to be superficial and they tend to run along the top of the intestinal folds. Some investigators have likened these ulcers to "snail tracks;" they tend to run across the tops of the folds and do not tend to develop down in the depressions between the folds. Bacillary dysentery ulcers do tend to run more or less across the intestine, while the amebic ulcers tend to run more or less lengthwise of the intestine.

In some of the cases that have not been so severe and have survived for long periods of time, in bacillary dysentery you find the intestinal wall very thick. You also find, if you examine other organs, that sometimes the myocardium and the pericardium are involved; occasionally there are suprarenal hemorrhages, and one of the things that you see occasionally along the large intestine is little cysts that look like tapioca, tapioca-like retention cysts along the large intestine.

One other thing before we go into the symptomatology of this condition: I should like to remind you of the fact that it was back in about 1917 that D'Herelle, the French investigator, began his work on bacteriophage, and he began this work on bacteriophage because of his findings in bacillary dysentery. He would examine the stools of patients with bacillary dysentery and sometimes he could find organisms and sometimes he couldn't. He began to wonder why in some of these severe cases he couldn't find the bacilli. It was through his work that he discovered that there was a bacteriophage which caused a lysis and disappearance of these bacteria in certain cases.

Most of our textbooks tell us that the incubation period of bacillary dysentery

is from about two days to a week. I should like to say that more correctly it is from a few hours to a week. I have seen this sort of thing happen any number of times. It usually turned out to be an American tourist coming through the Near East. He would get off the ship at Alexandria or Port Said in Egypt, and then would go into the native markets. Out in the Near East the natives grow one of the most beautiful types of lettuce I have ever seen anywhere. It is a long thing, so tall and so big around; it is a perfectly marvelous green, and it is the most crisp, delicious lettuce that is grown. Some of these tourists who have been on the ship for a long time go down into the markets and see these beautiful stalks of lettuce, buy some, and munch them. Then three or four days later, by the time they have gotten up to the harbor in Bierut, the ship surgeon would call me down and say that he had a case that had to be put off at the hospital. After their visit to Alexandria or Port Said that night or the next morning the individual developed acute intestinal symptoms and during the course of the next day or two or three days had become violently ill with a bacillary dysentery.

Another thing that one ought to keep in mind in going to various parts of the East is that the natives of that part of the world have not developed the same type of hygiene and sanitation that we have. I used to do a good deal of consultation with some of the native Syrian physicians and with some of my French colleagues who were there, and I remember one morning about five o'clock being called out to go up the coast about six miles. Just as I got out of the city I ran into a procession of carts coming in with their vegetable produce for the market. These carts were filled to the brim. All the native farmers had their lettuce, strawberries and other things of that kind piled high. Here was the Mediterranean Sea on one side of the road, a perfectly beautiful blue color and about as pure as anything could be for that large volume of water; and on the other side of the road in the depressions there was the drainage from a recent rainstorm. These fellows would stop their carts, and I saw a half dozen of them stop in one spot around a nice big dirty mud puddle, with all the drainage of the road going into it. They were taking off their bunches of lettuce and their little crates of strawberries and carrying them down to this dirty puddle, dipping and freshening them before they took them in to the market. You can see why during the first several years in the Near East I never ate a strawberry unless it was a boiled strawberry.

The incidence of dysentery in those areas is pretty high.

When these patients developed their symptoms usually they would start with very sudden colicky pains, in the abdomen. They very quickly, in the course of a few hours, sometimes, almost as soon as they developed their colic, developed dysentery. They would begin to have frequent bowel movements. Sometimes with the onset of the colicky pains they would begin to vomit. Acute bacillary dysentery is "lying-down dysentery;" there is no getting away from it; it is very different from amebic dysentery. You can call amebic dysentery in the average case "sitting up" or "walking-around" dysentery, if you want to, but bacillary dysentery in the acute case is "lying-down" dysentery. The patients want to go to bed and they are ready to go to bed.

The temperature is an exceedingly variable factor. We find in some of them temperatures from 101 to 104. Occasionally the temperature will go even higher. Some of the very acute cases that are very severe and are not reacting well and are very toxic will not have any fever at all. Some of these cases will have actually a subnormal temperature and will be in a state of collapse.

A good many of these patients are suffering so much and having so much pain that they will exhibit mental symptoms, and you will find them quite disoriented and disturbed. Practically all dysentery patients, and this includes not only the severe bacillary but milder bacillary forms and also the amebic forms, have an anorexia. They don't want to eat. They have reasons for that, because when they eat, very frequently their pain and their bowel movements increase.

When you examine them you will find them tender along the colon. They may also complain of bladder tenderness and vesical tenderness. How many stools can an acute severe Shiga have? Anywhere from twenty to seventy a day. Some of these patients have to be on the bedpan almost all of the time, and some of the time you can't keep the bedpan available fast enough. In some of the cases, the more severe ones, the stools may consist of almost pure blood with only a very small tinge of mucus. In the milder ones there is less blood, more mucus, and after the first few movements there is very lit-

tle feculent material in bacillary dysentery stools. That is another thing I would like to stress, because it is one of the differential points between bacillary and amebic dysentery. The bacillary stool has very little feculent material in it after the first few movements, but lots of blood and more and more mucus.

When you examine these patients they may be very seriously dehydrated if the condition has lasted for any length of time. The heart may be very weak, the pulse quite rapid. As far as the blood picture is concerned, there is nothing diagnostic about it at all. You may have a moderate leukocytosis, some increases in polys, and in some of the most severe bacillary dysenteries you may have no leukocytosis at all. There is one thing that you will find in the stools that is very characteristic, and I should have mentioned it a minute ago. You will find along with the very small amount of feculent material a lot of pus cells and a great many large macrophages. These large macrophages are very important and sometimes are very helpful in making your provisional diagnosis.

As far as the milder cases are concerned, the onset of some of them is more gradual. Those of you who have seen some of the Flexner dysenteries that we see in this country and some of the Sonne dysenteries, know that the condition can start out as a sort of bowel looseness and at times may simulate simply a mild diarrhea. It may be a watery diarrhea with stools up to fifteen, eighteen, twenty a day, sometimes even fewer. Then we will usually find, sooner or later, these patients complaining of colicky pains, or cramps. They also don't want to eat. Anorexia, I should like to emphasize again, is very common in all these patients. Their stools are rather scanty, even these milder ones, although they are frequent. In the milder cases, frequently the temperature is normal. Maybe the temperature is 99, 100, 101, and quite variable, at times even subnormal.

In some of the cases that go on and become more chronic you will find frequent stools with a good deal of mucus and blood; you will find these patients lose weight and become more and more dehydrated; they lose a good deal of strength; they have a great many digestive disorders, and not infrequently they will develop an intercurrent infection, like a lobar or bronchial pneumonia, and be carried away by it.

Some of these bacillary dysenteries that survive, that get over the acute period, especially some of the milder ones and more chronic ones, will begin to complain of their joints. Arthritis complicating the bacillary dysenteries is rather common and it usually begins to involve the ankles first, although it may involve the elbows first, more commonly the ankles and the elbows. Occasionally these joints will have effusions in them. Some of these patients will develop eye complications; they will develop iritis and inflammation of the eye structures.

As you can well imagine, a lot of bacillary dysentery patients will have hemorrhoids. Hemorrhoids may be a very real complication and very common following bacillary dysentery, and sometimes they are a little confusing because you may wonder why your patient continues to pass blood even though you can't find any more organisms. He has been painful all along because of the terrible tenesmus; he keeps on being painful and keeps on passing blood. It is an important thing always to check and see whether that patient has hemorrhoids or whether he has developed some new hemorrhoids during the dysentery.

Occasionally as a complication you run into peritonitis and adhesions, and in chronic cases we not infrequently run across cicatricial contractions and actual obstructions in patients who recover.

I will repeat only a few differential points. I want to compare now, first, the bacillary and amebic dysenteries. Incidentally, these two conditions occur commonly in the Near East and in the Far East. Almost everywhere amebiasis is present you find the bacillary dysenteries also and it is frequently one of your problems to differentiate between the two because the treatments are certainly not alike in any sense. If you treat a bacillary dysentery as an amebic dysentery you won't get anywhere with it and if you treat an amebic dysentery as a bacillary dysentery you won't get anywhere with it.

Bacillary dysentery onset is usually much more acute. The amebic dysentery onset is much more insidious. You do not find a patient getting amebiasis, an amebic infection, one day and coming down with an acute dysentery in a few hours or a few days. It usually takes anywhere from a minimum of a week up to eighty days for an amebic infection really to manifest itself.

Bacillary dysentery patients are always toxic, much more toxic than the amebic

patients. The amebic patient is not a toxic patient ordinarily. He may be if he has certain complications. In the bacillary dysentery patient there is relatively little fecal material in the stools. In the amebic dysentery patient there is always much more fecal material in the stools. That is a very definite finding that differentiates the two.

You never find arthritis as a complication of amebiasis, at least I never have seen arthritis as a complication of amebiasis and I suppose I have seen thousands of cases of amebiasis. You not infrequently find arthritis as a complication of the bacillary type.

In the bacillary type you never find any hepatic abscesses. In the amebic type, not infrequently your patients will develop as a complication amebic hepatic abscesses.

When you examine the stools of the bacillary type you may be able to isolate dysentery bacilli, you will see many pus cells, you will see lots of macrophages. Those macrophages are important. In the amebic type you can sooner or later isolate either the vegetative ameba or the cyst forms. You will not find the dysentery bacilli present and you do not find the large macrophages.

One or two other points in the diagnostic situation: Our bacillary dysenteries form agglutinins in the blood just as our typhoid organisms do. If it is typhoid or paratyphoid, sooner or later we get a positive Widal, which helps us to make the diagnosis. The same thing is true, as far as agglutinins are concerned, in the bacillary dysenteries. As time goes on these agglutinins develop, but if you wait for them to develop before you make a diagnosis it is too late to do much for the patient, so they aren't very helpful from the diagnostic standpoint.

Bacteriophage sometimes can be helpful in the diagnosis. Intradermal tests have been suggested. They are not worth very much. People talk about proctoscopic work and sigmoidoscopic work; that is all right in amebic dysentery, but don't ever try to put a proctoscope in an acute bacillary dysentery if you want to remain friends with that patient because the patient is suffering so much that if you try to use the sigmoidoscope or proctoscope you hurt him more than is justified by the benefit you get from the examination. I should like to leave just a word of caution there: proctoscopic examination is not indicated in these very acute dysenteries.

In taking an overall picture of the mortality of dysenteries, it is exceedingly variable. In the mild bacillary dysenteries the mortality is, perhaps, 2.5 or 3 per cent. In the severe dysenteries of the bacillary type the mortality rises until it gets up to 40, 45, 50 per cent, or even more, and of course it depends upon the organism that is responsible for the infection.

Having diagnosed a case of bacillary dysentery, what are you going to do about it? When I first went to Beirut in 1923, our method of treating bacillary dysenteries was to get them in the hospital and to bed as fast as we could. Then the first thing we did was to try to ease their pain; and the next thing we did was to give salts and castor oil, with the idea that we were washing the bacilli out and getting rid of the organisms and toxins causing the trouble. We washed a good deal of the patient's additional fluid away by that technic, too, but before we had some of the present-day treatment methods we probably did save some lives that way. That method is not being advocated at the present time. It is not a wise policy to begin purging bacillary dysentery patients. According to our present methods of treatment with the sulfonamide group, we have methods that are much more satisfactory and that produce good results. I want to give you very briefly a summary of the accepted standard procedures for bacillary dysenteries at the present time.

We believe that sulfaguanidine is the drug of choice. There are many reasons for this into which I will not go. Because it is not readily absorbed we can give fairly large doses at the beginning and large doses right through. The initial dose should be about 3.5 grams. You can repeat that dose of 3.5 grams every four hours day and night until the number of stools per day is reduced to five or less. Three and a half grams is the initial dose, 3.5 grams every four hours the clock around until the number of stools has been reduced to five or less. Then you put the patient on a maintenance dose, which is 3.5 grams every eight hours the clock around until the stools have been normal for four days. That is the present accepted treatment for the acute bacillary dysenteries and it is also the treatment that is advocated in the Surgeon General's circular letters to the Medical Corps.

In chronic bacillary dysentery we also give an initial dose of 3.5 grams, but we do not give it every four hours in repeated doses. We give it every eight hours the clock around. We do not advise keeping

up this drug longer than two weeks.

If we do not have sulfaguanidine available we can use sulfathiazole or sulfadiazine, the initial dose of either one being 4 grams, but the followup dosage being not over 1 gram every four hours. That is because of the higher absorption of these substances.

There is one thing that I should like to caution about very definitely here and that is the bacillary dysentery patients are dehydrated. You must give them fluids, and if you don't keep up the fluids when giving these large doses of the sulfonamide drugs you may run into urinary tract complications. It is imperative in treatment with these sulfa drugs that you keep up large quantities of fluid.

As far as other treatments are concerned, we do not believe that serum does very much for bacillary dysenteries unless it is for the Shiga type or one of the Flexner types where we have a specific serum for a specific organism. The mixed and polyvalent sera are not very satisfactory and do not accomplish very much.

I have had some very great disappointments from the use of these polyvalent sera in years past and I am satisfied that the sulfa drugs are a tremendous improvement over them.

When it comes to feeding your dysenteric patient, he has to be on fluids at first. Lactose and tea are very good; intravenous glucose and saline are helpful. Bacillary dysenteric patients notoriously do not tolerate milk well. The tendency very frequently in these conditions is immediately to say, "Well, let's give the patient some milk." Bacillary dysentery patients do not do well on milk and should not be given milk early. Later on you can use citrated milk and acid milk and develop a diet which includes various soft substances, soups and custards and similar things, and gradually build up to a regular diet.

When it comes to prophylaxis, I should like to mention just one or two things in regard to that. Prophylaxis is chiefly personal cleanliness and avoiding circumstances where one can pick up the infection, sometimes easier said than done, but that is the method.

Vaccine therapy, in my opinion, is not worth the trouble that it takes to give it, as far as bacillary dysentery is concerned. The results have been very disappointing with it. The number of patients who have come down with bacillary dysentery in spite of vaccine therapy is very large. If you are going to use serum, it is my opinion that you should use it only where you know the organisms and have specific sera for that organism. The use of the polyvalent sera is certainly not very helpful.

Part of the treatment of bacillary dysentery is purely symptomatic: you must endeavor to keep the patient comfortable. Do not be afraid to use hot fomentations, stupes, hot-water bottles, and do not be afraid to use morphine where it is necessary in these patients. As your patient improves and is having a good deal of gas and quite a bit of gastrointestinal distress, you may use charcoal or bismuth. I do not believe that salol as an intestinal antiseptic is of any value whatsoever in bacillary dysentery.

The problem of bacillary dysentery is one that is with us here in this country in the milder form. We see a good many of the milder dysenteries belonging to this group. We are learning that the sulfonamides are of very great help in some of them. We learned in one group of soldiers that were studied a few months ago by a group of army physicians that succinyl sulfathiazole in one epidemic did nothing to shorten the period of illness, did nothing to reduce the mortality, but it did reduce the number of carriers following the disease.

There is another thing that we must look out for in areas where we have an epidemic: we should try to find our carriers because many patients, after they get over their acute symptoms, do act as carriers, just as typhoid patients do for variable periods of time.

While we look for the virtual conquest of tuberculosis within the measurable future, we cannot hope for the annihilation of the tubercle bacillus. Unless Nature takes an unexpected whim to do away with it beforehand, this acid-fast rod may be present at the obsequies of the last man on earth. Therefore, it is well for tuberculosis workers to prepare for permanent duty during war and peace, in good times and bad, lest the microscopic vegetable seize the unsuspecting moment and the fertile spot to seed itself anew.—J. Burns Amberson, M. D.

The hospital must share with the home the disgrace of being a major reservoir of tuberculosis infection. Patients with undiagnosed, as well as diagnosed tuberculosis pass on the disease to employees. Employees take it home to their families.—The Modern Hospital, Oct., 1943.

THE ADMINISTRATIVE CONTROL OF SYPHILIS

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In 1876 Marion Sims, then President of the American Medical Association, stated in his presidential address that "in cholera and yellow fever and in smallpox and syphilis we recognize cruel and fatal diseases, easily communicable, each attacking the human family in its own peculiar, deadly way; and we propose to deal with them all in the same manner, taking the surest, safest and quickest method of protecting the community against their pestiferous presence and preventing their spread among the well." Although this paper was published in the Journal of the American Medical Association 67 years ago and three of these diseases have practically disappeared, no unified effort or official action towards controlling syphilis followed this statement until about 1935 when the application of the principles of epidemiologic control were first initiated.

The control of syphilis means essentially the same thing as the control of smallpox, cholera, yellow fever or any other communicable disease, that is, its virtual eradication. From the standpoint of public health, syphilis may be regarded as two diseases, one of which, early syphilis, is infectious, and like other communicable diseases, requires the attention of public health officials to prevent its spread; the other, late syphilis, is not a public health problem because of infectiousness, but like cancer, demands the attention of public health officials because of the high incidence of incapacitating sequellae and death which it causes.

Although the present public health program in the United States considers both aspects of the disease, effective control of its transmission would eventually eliminate the late stage as a public health problem. Therefore this paper will be confined to those factors influencing control of the spread of the disease, critically reviewing past efforts, the epidemiological status at present, and the outlook towards eventual eradication.

In 1938 Federal funds were first made available to states in order that they might, simultaneously, initiate and continue a uniform program of venereal disease control. This marked the first instance in which our entire country undertook an official organized effort towards controlling a single group of diseases (with the possible exception of tuberculosis and Bangs disease control in cattle). Early in that year national conferences were held, composed of the country's leading syphilologists and public health officials, and it was agreed, as to early syphilis, that the spread of infection could best be prevented, not by reformation of the sex morals of a nation, or by forcible isolation of infectious persons, but by the early use of the arsenicals. It was further agreed that to heal infectious lesions, and to reduce the incidence of infectious relapse to a minimum of 2 percent or less that cases of early syphilis should receive at least 20 injections of an arsenical plus an equivalent amount of heavy metal given continuously over a period not to exceed 40 weeks. Obviously, then, *if it were possible* to recognize every individual with early syphilis and administer this regime of treatment, the spread of infection would be immediately and enormously reduced.

Later in 1938, with this possibility in mind, and concurrently with the nationwide educational program initiated by the United States Public Health Service, the Kentucky State Department of Health, upon receipt of Federal funds and with the advice and help of the Committee on Venereal Disease Control of the Kentucky State Medical Association, undertook to organize and direct an intensive syphilis control program.

At this time little accurate knowledge was available as to the extent of the problems involved. As to prevalence, it was known from serological sampling in a few areas in Kentucky that from 2 to 3 percent of the white population and from 17 to 25 percent of the colored population gave evidence of syphilis infection. That same year Usilton and Vonderlehr showed fairly conclusively, by statistical methods, that in the United States, by the time a person attained the age of 50 his chances of having contacted syphilis was 1 in 10. This statement was often misinterpreted to mean that 10 percent of the people had syphilis. Actually, at any one time probably not more than 3 to 4 percent of the population had detectible syphilis, and probably not over one third of these were infectious. But even this means that there were in Kentucky about 100,000 persons with detectible syphilis of whom about 33,000 were capable of spreading the infection. (Map 1)

Read before the Jefferson County Medical Society.

On starting this program, free antisyphilitic drugs were made available by the State Department of Health to all public health clinics and to any physician who would administer the drug to a patient with syphilis and report the case. Venereal disease dispensaries or clinics were established in every local health department not then operating one, and in counties and cities not having a health department, the part time health officers or part time clinicians were employed to operate clinics at which any person economically unable to take treatment from a private physician could obtain *free* treatment. Laboratory facilities were expanded in the State Department of Health and the Kahn test was made available to all physicians and clinics desiring to use it. Reports were made as either negative, doubtful or positive and the ambiguous, relative and misleading plus marks were abandoned. Much educational material was distributed. Through the use of the press, radio, schools and lectures the public soon became interested. Case-finding programs were started and serological dragnets among foodhandlers, domestic servants and industrial workers were used.

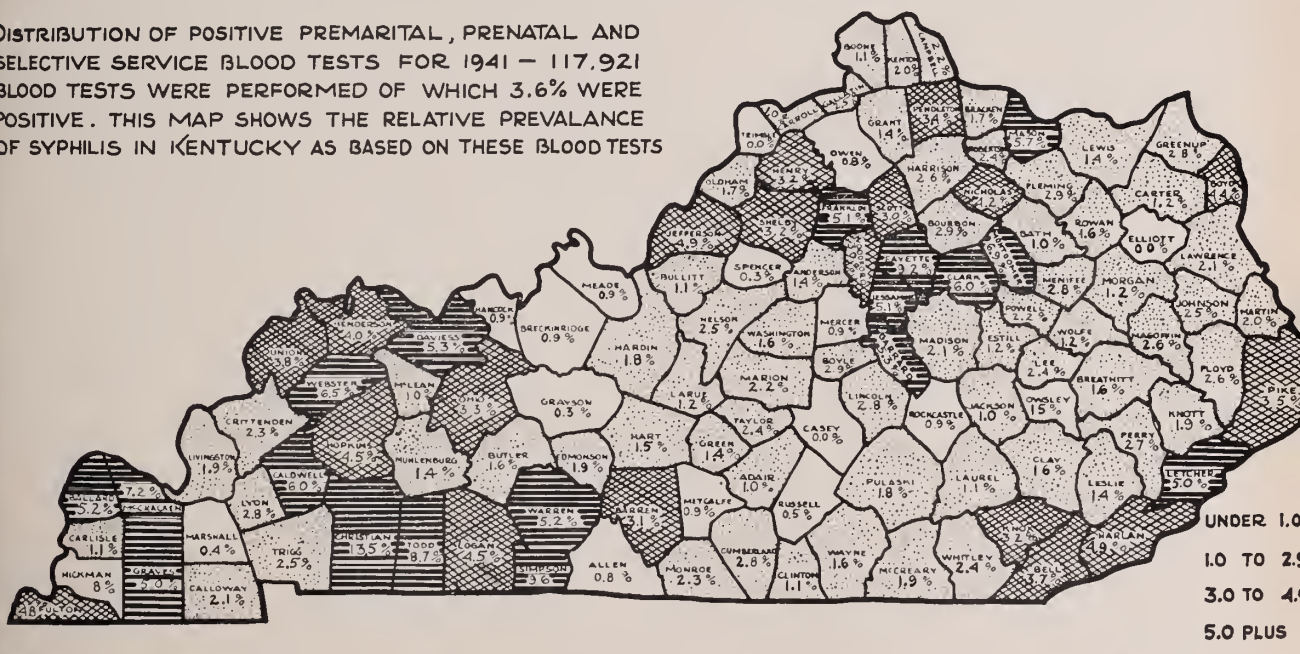
A central tabulating unit was established in the State Department of Health to which all clinic cases and treatments administered in clinics were reported. Using modern business machines valuable reports were made to the clinicians, listing for them the patients who were lapsing and others requiring follow-up work, home visits, etc. Valuable tabulations were made possible enabling the State Venereal Disease Control Officer to have, daily or at regular intervals, an intimate picture of the activities in each community and in the State as a whole. About 275 generalized public health nurses in local health departments were utilized as follow-up workers. By the end of 1939 approximately 20 percent of one fifth of the time and personnel of health departments was consumed in venereal disease control activities. (Map 2)

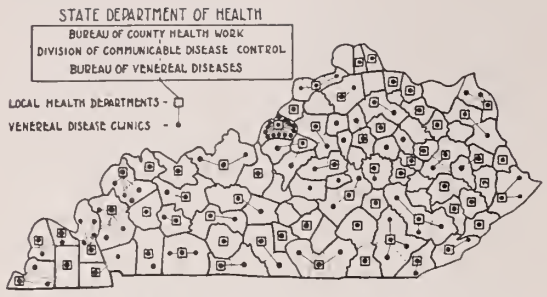
In the summer of 1940, an opportunity was afforded to take stock of these efforts and with the help of the United States Public Health Service a survey was made to determine the number of persons actually under treatment and observation by all authorized medical sources in Kentucky. This survey provided some very enlightening facts as to the epidemiology of the diseases and other problems valuable to control.

A confidential questionnaire was completed by 2,227 doctors or 98 percent of

PERCENT OF BLOOD TESTS POSITIVE FOR SYPHILIS BY COUNTIES, 1941
Performed By Kentucky State Health Department Laboratory

DISTRIBUTION OF POSITIVE PREMARITAL, PRENATAL AND SELECTIVE SERVICE BLOOD TESTS FOR 1941 — 117,921 BLOOD TESTS WERE PERFORMED OF WHICH 3.6% WERE POSITIVE. THIS MAP SHOWS THE RELATIVE PREVALANCE OF SYPHILIS IN KENTUCKY AS BASED ON THESE BLOOD TESTS





Organization of a State Wide Program of Venereal Disease Control

the 2275 then in active practice in Kentucky and also by 123 venereal disease clinics and institutions treating syphilis in the State. Every patient with syphilis seen at any time between May 1 and August 31, 1940 was listed by date of onset, dates of first and last visits for treatment, age, sex, color, economic status, residence, stage of infection and total amount of treatments given.

Of the 2227 physicians returning the questionnaire, 1434 or 64 percent had no case of syphilis or gonorrhea under their care, and 48 percent of the private patients were in the hands of 5.7 percent of the physicians. Of 803 doctors reporting cases of venereal disease, 377 had both patients with syphilis and gonorrhea, 289 had only cases of syphilis and 137 had only cases of gonorrhea. Of all the syphilis cases 80 percent were being treated in public clinics and 20 percent by private physicians.

There were 11,587 patients under treatment for syphilis during the period, a total prevalence rate of 4.1 per 1000 population. White males had a higher rate than white females, but among the Negroes the reverse was true. The total rate among the negroes was 8 times as high as among the whites. (Prevalence rates determined by this method are a minimum and far below actual proportion of the population infected as borne out later by Selective Service testing.)

This survey shows also that each year 11,697 persons who acquired syphilis seek treatment in this State, a discovery rate of 5.1 per 1000 population. About one third of these, 3,960, were of less than one year's duration, making an annual incidence of new infection of 1.7 per 1000 population.

Syphilis in Kentucky is predominantly a disease of youth, the median age being 24.2 years. Twenty percent (20%) of the early cases were in their "teens." A considerably greater proportion of the girls than of boys were under 20 years of age, and a somewhat higher percentage of the girls were Negroes.

A much higher proportion of the syphilis patients were found to be in the low income range than in the general population. This is probably explained by the fact that so many of the syphilis patients are young persons and have not yet attained economic stability.

Urban rates were two to three times as high as rural ones, for both races, the difference being greater among women.

Less than one third of the patients started treatment within one year of onset—39 percent of the private patients and 29 percent of those in clinics. Moreover, 8 percent of all patients had already developed recognizable late complications when first seen by the doctor reporting. (This would undoubtedly have been much higher if spinal punctures had been done on all of the patients.) From these figures it must be clear that if over two thirds of the patients who come under treatment for syphilis do so more than a year after the disease is acquired, not only a larger number of disastrous outcomes but an augmentation in spread is to be expected.

In private practice 66 percent, and in clinics 21 percent, of the patients were kept under treatment or observation for less than 6 months. As a final result only 30 percent of all private cases and 38 percent of all clinic cases received as much as 20 arsenicals and 20 heavy metals, which is undoubtedly a minimum of sufficient treatment.

On June 12, 1940 a State law requiring physicians to take a serological test for syphilis on pregnancy cases became effective. Since that date there have been 154,685 prenatal serological tests performed. Of this number 2,642 or 1.7 percent were positive. 86 percent of the total tests were done in public health laboratories.

On January 1, 1941, an Act of the General Assembly became effective, requiring all applicants for marriage to submit to serological tests for syphilis and to have a medical certificate of freedom from infectious syphilis. Since that date 234,637 such laboratory tests have been performed. Of this number 5,385 or 2.3 percent were positive. 79 percent of the total premarital tests were made in private laboratories.

In preparation for these two described enacted laws a survey was made of all the laboratory facilities within the State which were performing or intended to perform serologic tests for syphilis in ac-

cordance with the provisions of these laws. This survey showed that there was a definite lack of uniformity in laboratory procedures, techniques and results. As a consequence standards were set up by which laboratories might be approved for the performance of these serologic tests. To be approved, all private and public health laboratories were required to meet these standards and be checked periodically for sensitivity and specificity with the authors of the five accepted serologic tests. To date there have been 84 private laboratories and 5 public health laboratories meeting these standard requirements and approved. These laboratories are well distributed in and accessible to all sections of the State.

The Selective Service Act of 1940 required that all registrants for military duty have a serologic test for syphilis before being inducted into any branch of military service. Since the latter part of that year to date there have been performed 411,167 serological tests on selectees in Kentucky. 92 percent of these tests were performed in public health laboratories. These tests uncovered 16,487 young men infected with syphilis, a rate for the group examined of 4 percent. These men were deferred for treatment which, until recent months, consisted of 30 doses of arsenicals and 40 doses of bismuth before they could be accepted by the Armed Forces. An effort was made by health departments to follow up each of these 16,487 boys and place them under treatment, either with their family physicians or in the health department clinics. A survey made in the middle of 1943 indicated that 64 percent of these boys were taking treatment. The continued follow-up of all of these cases to place and keep them under treatment until inducted, entails an enormous amount of detective work, doorbell ringing and clerical work, since many of them have left their home communities and gone to other cities and states to work.

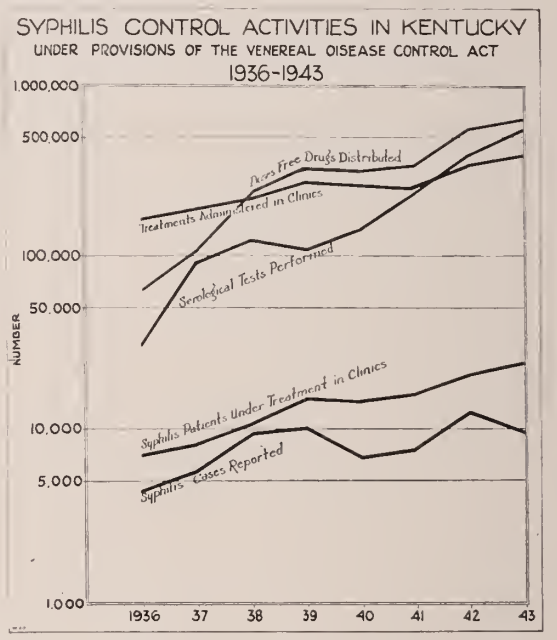
With the mobilization of troops within the boundaries of the State and the high venereal disease rates that were occuring among these troops it was immediately apparent that our venereal disease control activities among civilians must again be intensified if we were to protect from venereal infections the soldiers and sailors who were visiting in our communities. On May 7, 1940 an agreement was made by the War and Navy Departments and Federal, State and local health departments to exchange such information and exert such efforts as may be required to find and bring under treatment every possible source of venereal disease infection to military and naval personnel. Since that date and as a result of this agreement the Army and Navy report to the State Department of Health the source of infection of each case of venereal disease occurring among their personnel, whenever it is possible to obtain such information. This information is forwarded immediately to local health departments and an investigation is made to apprehend all such contacts; and to examine, treat, and if possible, isolate those found infected. Early in 1942, fifty two lay follow-up workers were employed, given a short course of training, and assigned to strategic areas within the State from which the major proportion of venereal diseases were emanating. They worked under the direction of the local health officer and had such powers to enforce the regulations of the local Board of Health in isolating and quarantining infected individuals, as were delegated to them by the local Boards of Health. These men soon learned of the activities of professional prostitutes operating in their communities and were able to obtain sufficient evidence by which all open houses of commercialized prostitution in Kentucky have been closed. A Federal law known as the May Act designed to control prostitution around military posts, passed in 1940, has been invoked in some states where local officials failed to or could not meet the problem. It has not been necessary, however, to use this law in Kentucky. An act was passed by the Kentucky General Assembly, effective June 2, 1942, declaring those persons engaging in, aiding or abetting prostitution were guilty of a misdemeanor and were subject to the penalty of 6 months in jail or a maximum fine of two hundred dollars ($200.00). The closing of the houses of prostitution had the effect of reducing actually and mathematically, the number of exposures per prostitute per given period of time. The prostitution problem then became, and now continues to be, one of controlling the clandestine prostitute, the street walker and the juvenile delinquent. Approximately 80 percent of the venereal disease contacts reported today by the Army are young girls under the age of 20 who operate from beer taverns, restaurants and dance halls. The only effective approach towards controlling these individuals has been by the follow-up of contact reports from known cases of venereal disease in military personnel and in civilian life.

Practically every county jail in the State for the past two years has been crowded with these infected promiscuous girls. This is admittedly a poor method of managing sick individuals but until hospital beds are available in which these patients may be isolated during their infectious state it is felt that the present procedure must be continued.

The case load in our clinics increased in 1943 until a total of 22,039 patients received treatments in the clinics during that year. The central tabulating unit in the State Department of Health has registered to date 49,194 Kentucky citizens all of whom have been under observation or treatment for syphilis in the public health clinics within the past five years.

A limited number of early infectious cases of syphilis have been treated in a few of the clinics in the State by the various methods of intensive therapy. The 5 day treatment, in which 1500 milligrams of arsenoxide is given 10 hours daily for 5 days by intravenous drip, is being used in one area. Some clinics are using a daily dose of 60 milligrams of arsenoxide for 20 days and other clinics are using 3 doses a week of 60 milligrams of arsenoxide each for 7 weeks. These short types of treatment are particularly significant from the standpoint of public health, in that the patient is usually isolated during the treatment period and that the treatment period is so short that almost 100 percent of the patients starting treatment, have continued to completion. Because cases of early syphilis treated by this method have less opportunity to transmit their disease, and also because many more are cured than by conventional therapy, it is felt that the higher treatment mortality is justified.

At the present time there are under construction in the City of Louisville two units of a State-wide Rapid Treatment Center financed by Federal funds. One of these units is designed as a 50 bed institution in connection with the General Hospital in which the 5 day intravenous drip method of treatment will be used and, if possible, some fever therapy. The other unit is to be a 200 bed facility in which all cases will be detained for a period of 6 weeks during which time they may receive the 6 weeks rapid treatment recommended by Eagle and also treatment for gonorrhea. These two institutions, operating together with one venerologist and an adequate professional staff can isolate for 6 weeks and treat 1732 infectious cases of syphilis each year. Federal funds will be forthcoming for the maintenance of these institutions as long as mobilization continues. The permanency of these facilities depends upon proving their efficacy as a public health instrument. At the present time there are 30 such institutions in operation in 18 states in the country.



Results: It is most difficult at the present time to evaluate the results of past efforts. The best determination of the incidence of syphilis in the civilian population may be obtained by making a survey such as the one completed in 1940 of all treatment sources in the State in a given period of time. Such a survey is impossible at this time, due to the acute shortage of trained personnel. The best figures available that give an indication as to the effectiveness of present venereal disease control are the declining rates in military personnel stationed in this country. The syphilis rate in the Army has decreased from 9 per thousand per year in 1939 to a rate of less than 5 per thousand in 1943. In the Navy the rate has dropped from 13 per thousand per year in 1939 to less than 5 per thousand per year in 1943. The rates in all military posts in Kentucky have shown a marked downward trend during this period, these rates being somewhat less than those for the military personnel in the nation as a whole. All authorities agree that this downward trend is a reflection of the decreasing incidence of infectiousness in the civilian population.

Summary

1. In 1938 an intensive venereal disease

control program was developed in Kentucky with the objective of finding as many early cases of syphilis as possible and holding them to treatment by voluntary means until a minimum of 20 arsenicals and 20 bismuth injections were given. Free drugs were made available. Clinic and laboratory facilities were expanded.

2. A survey in 1940 showed that of 11,587 patients with syphilis seeking treatment that year two thirds were over one year duration and further that 62 to 70 percent of the early cases were lapsing before receiving minimum adequate treatment. There was some evidence, however, that the incidence of new infections was decreasing slightly. The prenatal and premarital laws became effective.

3. Then came mobilization, the program was intensified along the lines of epidemiological approach. Clinics were expanded, case finding and case holding investigators were employed. Methods of reporting and tracing sexual contacts of patients in both civil life and in military personnel were developed. The anti-prostitution act was passed and made effective and all known houses of commercialized prostitution in Kentucky were closed. Quarantine and isolation of infected promiscuous girls was generally used. Intensive therapy (5 days and 7 weeks) was used in a limited number of infectious cases.

The number of doses of free drugs distributed increased from 65,000 per year in 1936 to 639,000 doses in 1943, an increase of 883.1%.

The number of treatments administered in public health clinics increased from 176,000 in 1936 to 387,790 in 1943, an increase of 120.3%. (The difference between the treatments administered and the drugs distributed is accounted for by the increasing use of free drugs by private physicians.)

The number of serological tests for syphilis increased from 31,284 in 1936 to 544,705 per year in 1943, an increase of 1641.2%.

The syphilis patients under treatment in clinics increased from 7000 in 1936 to 22,039 in 1943, an increase of 214.8%.

The number of new cases of syphilis reported to the State Department of Health increased from 4,387 in 1936 to 9,677 in 1943. This represents an increase of 120.6%.

4. The results are not readily apparent in civilian population. Dislocated population, loosened sex morals, troop maneuvers, all tend to keep the picture changing. The syphilis rates in military personnel are now lowest in the history of the Army and Navy.

5. The future of syphilis control probably lies in a program for the hospitalization of infectious cases and institution of rapid therapy, whether it be the administration of the 1500 milligrams of Mapharsen in 5 days or 7 weeks, fever therapy, or the use of penicillin.

DISCUSSION

Hugh R. Leavell: The essayist deserves the greatest degree of commendation for getting together an enormous volume of useful material and presenting it in a clear manner. It is a pleasure for us in Louisville to have him working with us. We are particularly fortunate having him and Dr. Caudill on the Mayor's Standing Committee which is one of the things which has done as much as any other to help control the situation. About eighteen months ago, the Mayor formed a committee with representatives from agencies in the community interested in the control of syphilis with members from the police department, the vice squad, the police court judge, the law department, public health, representatives from welfare agencies and liquor administrator. All of them work with the Army people from Fort Knox and Bowman Field. It has had enormous value in putting into effect some of the principles Dr. Teague has outlined this evening. I think it will be a splendid thing to get his figures so that we can study them a little bit more.

Oscar Bloch, Jr.: It is a very valuable aid to clinicians who are studying or treating the disease to hear a presentation of the sort Dr. Teague has given us. We do not get the opportunity to see the problem as a whole in treating the disease in private practice or even in clinics. Someone has to get the statistics and analyze them to tell us whether we are getting anywhere. It is hard to observe decline in incidence of syphilis; there is so much fluctuation. We may have in the clinic four early cases one day, six another, or none for several days, but it does appear obvious from the data Dr. Teague has presented that we are actually accomplishing something.

There is one rather interesting thing to speculate about: One of the maps which were presented, the map in which the differing prevalence of syphilis in different counties was analyzed, showed a patch of high prevalence in the far eastern edge of the state, adjoining West Virginia and Virginia; there was also a high incidence patch in the western part, this side of the Purchase; there was another patch in the vicinity of Louisville, and a patch in the Blue Grass where the prevalence seemed to be high. But there was a belt of low prevalence down through the high part of the mountains. When I was in Maryland, there was somewhat similar contrast in syphilis prevalence in different parts. There, prevalence was highest

where the population was most migratory or industrial, on the shores of the Chesapeake. In the mountainous section of Maryland, there is a very low incidence. There, except in a few mining districts, the population was rural, mostly agricultural, and rather stationary. I wonder whether Dr. Teague would say what is the principal factor in determining the high and low incidence in this state.

I have one question: In addition to treatment, has Dr. Teague found that civilian prophylaxis measures, in contrast with military, have found any place in the control of syphilis here?

F. W. Caudill: This is the third time I have heard this paper read and each time have learned something more about the control of syphilis in Kentucky that I have not known before although intimately connected with this work. It has taken a large amount of work by a great many people to do the job which has been so well outlined by Doctor Teague. I think the results, that are summarized, indicate a good trend toward control. I think further control depends on providing the facilities which he has mentioned—the facilities for hospitalizing cases and rapidly treating them. Rapid sterilization in isolation, in my opinion, is absolutely essential to more rapid reduction of spread. The conventional method of a weekly dose of an arsenical to early infectious cases of syphilis in loose women is entirely too slow. Of course, it is known that such women are not going to desist from their acts of sex promiscuity simply because they are asked to. Hence, these women go on exposing and infecting others, certainly for several days and probably for four or five weeks, even while under this slow plan of treatment.

I would like to comment on the map of Kentucky, exhibited by Doctor Teague and referred to by Dr. Bloch. This map has been discussed extensively in the light of what is known about factors influencing the spread of syphilis. The prevalence of this disease is largely influenced by three large factors: These factors are industrialization, urbanization and colored population. These factors singly or in combination definitely facilitate the spread of syphilis. The band of heavily shaded counties along the southeastern border of the State represents an area in which the mining industry is highly developed. The heavily shaded counties in Western Kentucky, in the vicinity of Hopkins, Webster and Henderson Counties, represent the western coal field where industrialization and color of population combine to influence spread. In the Purchase Area, urbanization and color combine to produce heavy prevalence as do the same two factors in the Bluegrass and in Louisville and Jefferson County. Knowing these facts has helped us a great deal in allocating funds and personnel in order to attack the disease where spread is most facilitated and where prevalence is greatest. Good results have been obtained in the control of syphilis throughout the State but the greatest dividends have been accomplished by work done in urban and industrial areas where the population is densest. This was an excellent paper and I thoroughly enjoyed it.

H. M. Weeter: My question on the higher incidence of syphilis in some sections of the State than in others has been explained on the basis of industrial and rural populations.

There is a marked change in the attitude of the public to syphilis. People are coming to discuss the problem more freely and even in some instances to insist on a health examination, when no known reason exists to suspect the disease.

In my private work there is a marked drop in the number of cases coming in with primary lesions, since the local health authorities and military authorities have taken measures to control exposure.

There is one weakness in the application of the prenatal law requiring blood tests during pregnancy—namely the late period at which the blood tests are made. Some patients do not have their tests made until after delivery. Since the purpose of the law is to insure a healthy child by having the syphilitic mother treated as early in pregnancy as possible, the value of this early treatment needs to be impressed on the prospective mother and, in some cases, on the physician.

Russell E. Teague, (in closing): I believe that Dr. Caudill in his discussion has answered the question of Dr. Bloch regarding the relative prevalence of syphilis in the various counties. Civilian prophylaxis has not been tried as a public health measure in Kentucky, except to distribute educational material. Posters were placed in public toilets throughout the State advising young people who might expose themselves, or who might have exposed themselves, about the use of prophylaxis. This met with considerable criticism from certain religious groups and the program was abandoned. I understand that California and a few other states have prophylaxis stations for civilian use, and some of them report good attendance.

I would like to join with Dr. Weeter in urging that blood serology be made on prenatal cases early in pregnancy, preferably in the first trimester, in order that treatment might be instituted early. I believe the rule still stands that every pregnant woman who has syphilis, or who has had syphilis, regardless of present serological findings and regardless of clinical findings, should be given treatment during the last 5 months of each pregnancy, to

be altered only by her ability to tolerate the drugs. The treatment given to a pregnant mother is given solely for the protection of the child. The benefits to the mother should be regarded as incidental.

GAS GANGRENE

Warren H. Cole, M. D.
Chicago, Illinois

Gas gangrene has always been a serious disease from the standpoint of virulence of the infection and the mortality rate. Development of this infection in wounds is usually dependent upon the amount and type of contamination. For this reason war wounds, particularly those sustained by infantry, are very susceptible to the development of the infection.

During the past several years, the incidence of gas gangrene (including war wounds) has decreased sharply. The mortality rate has improved slightly during the past decade or two but not as much as desired, as indicated by a mortality rate of 31.9 per cent in 79 cases reported by Warthen in 1942. In 1,389 cases in the A. E. F. there was a mortality rate of 48.5 per cent (Miller). Although no figures are available for publication relative to the mortality rate on Allied casualties of World War II, it is safe to say that gas gangrene is still a very serious disease. According to Tuchel and Circumeli, 80 per cent of the wounded in the European War of 1874 contracted gas gangrene; their report (which was European) likewise states that there was an incidence of 2 per cent infection in the war of 1914 to 1918, with a mortality rate of 28 per cent, and an incidence of 0.08 per cent in 1941, with a mortality rate of 15 per cent.

Of the various types of organisms responsible for the development of the disease, the three most important ones are Clostridium welchii, Clostridium septique, and Clostridium oedematiens. During World War I, Weinberg and Seguin demonstrated that there were many different strains of Clostridium welchii. As has been emphasized by Dowdy and associates, there is much variation in the type of disease, particularly as related to the local pathology produced. On many occasions symptoms may be atypical for gas gangrene in that crepitation is absent. On other occasions organisms such as certain strains of streptococci seem capable of producing mild crepitation and other manifestations similar to those encountered in gangrene produced by Clostridium welchii.

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The pathologic changes produced by the infection are naturally severe. The first change is swelling (resulting from edema), which usually progresses to a marked degree. The disease involves muscle primarily, although it may affect other tissues, including bone. However, the serous surfaces, including the peritoneal cavity, pleural cavity, and joints are not very susceptible to the infection. There is marked destruction of the red blood cells as evinced by the early drop of the red cell count. Other pathologic features will be discussed under Manifestations.

Clinical Manifestations: The onset of the disease is very sudden, appearing usually twelve or twenty-four hours after the trauma. One of the most consistent of the early symptoms is development of pain in the local area; concomitantly there is a marked rise in pulse rate. The amount of fever is slight, rarely being more than 101 or 102 degrees. The patient develops a pallor early, which may resemble shock, although the blood pressure still may be normal. Restlessness and sleeplessness are early manifestations. A very characteristic mousy putrefactive odor is detectable relatively early. Crepitation, which is usually present sooner or later, should not be considered an early sign. A thin, foul, sanguinous discharge from the wound is present soon after the infection becomes manifest. Weakness and prostration develop rapidly, and the pulse rate early becomes soft. Breathlessness is common. Even early in the disease the patient appears very ill. Anorexia is constant; nausea and vomiting are common. Leukocytosis is only slight. As the disease progresses, the skin over the site of the infection becomes discolored; usually it is first yellowish, changing to a bronze or purplish color, later becoming black. Vesicles, usually containing hemorrhagic fluid, occur as late manifestations. After the swelling has advanced to a severe degree, discoloration with gangrene will be noted. An X-ray picture of the soft tissues will show evidence of gas formation.

Examination of the wound itself will reveal a dirty gray discoloration of the fatty and fibrous tissue. At first the muscle becomes yellowish or brick red in color, depending upon the amount of hemorrhage present; later it becomes cyanotic and gangrenous. Muscle is the tissue most viciously attacked by the infection. It looses viability rapidly, including its

power of contractility. Septicemia occurs but is relatively uncommon.

TREATMENT: As in many other diseases prophylactic therapy is much more effective than treatment after the infection is established. Unquestionably the most effective single factor in the prevention of the disease is proper debridement of the wound. All foreign bodies and devitalized tissue must be removed during debridement. Leaving the wound open is a potent factor in diminishing the incidence of the disease. Pearl Harbor experiences, revealing the development of eleven cases of gas gangrene, all of which developed in wounds which were closed, support this statement (Halford). Gas gangrene did not develop in their wounds which were left open. There is still considerable confusion as to the relative efficiency of gas gangrene antitoxin in the prevention of the infection. However, Wharten did not notice an appreciable decrease in the mortality rate of patients receiving a prophylactic dose as high as 10,000 units. The author likewise has observed gas gangrene develop in patients who have had a prophylactic dose of antitoxin. However, since no harmful effects from the prophylactic injection will develop (with the possible exception of serum reaction), it appears that a prophylactic injection of 8,000 to 10,000 units would be advisable in badly contaminated wounds. Nevertheless, it is definitely known that its efficiency does not compare with that of tetanus antitoxin given prophylactically.

During the past year or two, considerable experimental work has been done relative to the effectiveness of the sulfonamide compounds; most of them are favorable. For example, Caldwell and Cox have been so favorably impressed with the prophylactic efficacy of local sulfonamide therapy that they advise the implantation of sulfathiazole into the wound as soon after the injury as possible. Hawking reports favorably on the prophylactic use of sulfonamides; he also obtained favorable results with polyvalent antitoxin, particularly against infections produced by Cl. welchii and Cl. oedematiens. McIntosh and Selbie obtained good results with proflavine, although they reported that penicillin was more effective from the prophylactic standpoint. Preliminary reports of Stewart and Kolmer indicate that active immunity can be produced by the injection of toxoids as recently developed for tetanus. The National Research Council and the British Medical Research Council are likewise working on this problem; I think we are safe in assuming that within a few months an effective method of producing active immunity in the human being will be completely worked out.

In active treatment of the disease, four major therapeutic procedures, including (1) sulfonamide therapy, (2) incision (perhaps amputation), (3) antitoxin, and (4) x-ray treatment, are available.

(1) Incision of the infected area with excision of devitalized tissue (particularly muscle) probably is the most important therapeutic procedure in combating the disease. With very few exceptions, the patient should be sent to the operating room for operation as soon as possible after the diagnosis has been made. The tissue is incised widely, exposing all devitalized muscle, all of which should be excised, since invasion of the infection takes place largely through muscle. The color of the muscle and its contractility will give one a fairly accurate idea as to the amount of muscle to be removed. Extreme care should be taken lest the proximal portion of a muscle be removed with the destruction of the blood supply to the distal portion. In other words, the blood supply of the muscle, or for that matter of any other tissue, must not be jeopardized. During the past year or so, we have been able to adopt a more conservative attitude toward amputation than that existing several years ago. However, we should add that amputation at times may be life saving. In the severe cases it will tax the judgment of the surgeon to determine whether or not amputation should be performed. No rules can be laid down relative to this problem. The intensity of the local pathologic changes and the toxicity of the patient will be important factors in deciding upon this point.

(2) There seems to be a fairly complete agreement among the experimental and clinical workers that sulfonamide therapy is effective in the treatment of gas gangrene. Dowdy and associates have been more impressed with the effectiveness of sulfadiazine, whereas Reed and Orr favor the use of sulfathiazole. The author has been convinced of the effectiveness of sulfonamide therapy; naturally such therapy should be instituted immediately after detection of the infection. As a matter of fact, if there appears to be the slightest chance of development of gas gangrene following the debridement of a badly traumatized wound, sulfonamide therapy should be started before or immediately after repair of the wound. If

local therapy is impractical because of nausea and vomiting, etc., the drug should be administered intravenously. Administration of the sulfonamide by mouth has two disadvantages: (1) it is absorbed slowly, and (2) it might interfere with the anesthetic if operation is contemplated. The author prefers the intravenous administration of 5 grams of sodium sulfadiazine over a period of a couple of hours. A sufficient amount of the drug should be given subsequently to constitute a dose of at least 8 grams during the first 24 hours, and at least 6 or 7 grams each subsequent day, until the infection is under control. After the first dose, oral use may be utilized if desired.

(3) There is still some difference of opinion regarding use of antitoxin. However, during the past several months there has been a tendency toward agreement that large doses of antitoxin of the polyvalent type should be given. It appears obvious that if serum is to be used at all, it should be used in large quantities, i. e., 70,000 to 100,000 units during the first 24 hour period.

(4) For the past several years Kelly has been a staunch adviser of the use of x-ray treatment in the treatment of gas gangrene. He is of the opinion that x-ray therapy will definitely lower the mortality rate. However, there is not complete agreement on this subject. In experimental work Dowdy and associates considered x-ray treatment beneficial, confirming the experiences of Kelly. However, they noted a peculiar incompatibility of x-ray therapy with sulfonamide therapy (as previously reported by Kelly), indicating that the two types of therapy should not be utilized together.

In addition to the four major therapeutic measures described above, other types of therapy, including blood transfusions, adequate fluid intake, etc., must be utilized as indicated. Experimental work of Caldwell and associates suggests that cortical extract should be beneficial. In all types of infection complete immobilization of the infected area is indicated. Excellent nursing care is, of course, desired. Sedatives are utilized to eliminate pain and produce sleep. Zinc peroxide applied locally to the wound has been found very efficacious. Penicillin promises to be very effective; as yet it is available only for research or military purposes.

It appears that during the past few years there is only a slight tendency for the mortality rate of the gas gangrene to be decreasing. Since the surgeon will probably utilize two or three different forms of therapy, it will usually be impossible to determine which type of therapy is most effective. The probabilities are that utilization of a combination of various therapeutic procedures is superior to any single type of therapy; at least that is the impression gained by the author during his experiences of the past several years. However, I agree with most surgeons that proper incision of the infected area with excision of the devitalized muscle is perhaps the most important therapeutic measure.

Summary

The incidence of gas gangrene in wounds, including those sustained in war, is decreasing sharply, but the mortality rate is decreasing only slightly. In war wounds the practice of leaving the wound open following debridement appears most responsible for this improvement in incidence. However, thorough debridement still remains a very important measure in prevention of the disease. Prophylactic use of antitoxin is not very effective, but should be used in badly contaminated wounds. In active therapy four measures, including thorough incision of the wound (with excision of devitalized tissue), sulfonamide therapy, antitoxin (large dose), and x-ray therapy, are available. Of this group free incision of infected tissue with excision of devitalized tissue (particularly muscle) appears to be the most effective. The necessity of amputation is fortunately decreasing. Of the various sulfonamide agents, the author prefers sulfadiazine. It should be started immediately after detection of the infection (preferably as sodium sulfadiazine intravenously). Sulfonamides are likewise effective in the prophylaxis of the infection. Penicillin promises to be very effective, but more data is necessary to determine the exact value.

National Dairy Council Nutrition News: One quart of milk furnishes about one half the daily protein need of a normal adult, one ounce of hard cheese furnishes one third of an adult's daily need of calcium. The American soybean crop will yield 209 million bushels most of which because of its high nutritional value will go into human and stock food. Calcium of milk is better utilized by the body than the calcium of other sources. Everyone needs riboflavin for growth and to aid in the process of burning food in the body.

THE FORGOTTEN MAN

B. Wilson Smock, M. D.
Louisville

The meeting this evening is the final one of another year in the life of our Society which dates itself from 1892. During all of these years, I am sure that the Society has been faced with many difficult situations, living as it has thru three wars. But I doubt if at any time during the past the membership of Jefferson County has had as severe a time and carried the load that we doctors of today have been saddled with. But in spite of our numerous problems, we have carried on to completion a most successful year. For this and for your loyal support, I am indebted to the membership of our organization.

It has been an honor and privilege to serve you and I will always remember 1943 as one of the most pleasant of my life. And as it has been customary for the President to deliver his address on this occasion, I shall now speak to you very briefly.

The Forgotten Man

During the early days of the New Deal, there was a lot said about the forgotten man, but to date no one has determined just who the forgotten man was or is. As one reflects on this subject, there are a number of forgotten men, but none more forgotten than the man of medicine. This is the development of the past few years and due to doctors' indifference in their own organizations and failure to support them.

In the early and middle part of the last Century, the men of medicine were distinct individualists and might be called true isolationists. They did not have any association and contact one with the other. This was in part due to the lack of roads, poor means of travel and lack of telephonic development. They developed into a mass of jealous, selfish and over sensitive men constantly feuding and fighting one with another. Their approach to the work of medicine was as different as their personalities and each followed the proceedings of his own devisment never profiting from the experiences of his fellow practitioners. This situation became so bad that some few men of vision and ideals started the organization of doctors. They built well, and gave to us our present County, State, and American Medical Association, an organization second to none. This association of doctors changed our predecessor's outlook on his professional brother and he rapidly improved his own knowledge and scientific attainments. The people developed a healthier respect for the profession and American medicine flourished and grew by leaps and bounds.

But today we are rapidly drifting back into our former places of isolationism not due to lack of organization but rather due to our indifference and over organization of special groups and sections of our profession of medicine. These are later developments of our medical organization which might be likened to the tail of the dog. This tail has grown until today the tail is wagging the dog rather than the dog wagging the tail.

Our organizations of doctors today have become legions and I am sure that there are so many that no one is acquainted with or can at least off hand name them all. In the past 25 years, we have weakened the structure of medicine as much as Christianity has weakened itself by over development into denominations and not presenting a solid front. This we must correct in the immediate future or we will again be the forgotten men.

We must place the proper importance where it belongs, on the County Medical Society, renew our interest and discharge our obligation more faithfully to this the foundation of all medical unity. It is always well to do first things first. American medicine needs a good old fashioned revival now.

What should we doctors of Jefferson County do? First, we should try harder to attend meetings. No one is better aware than I how hard it is to go to a night medical meeting after a hard day (and the days at present are hard ones.) There is a great increase in our population and our ranks have been depleted by the Armed Forces. It is also true that a number of our absent doctors were those interested in the County Society. So it is up to all of us at home to make a greater effort than ever before to attend the meetings.

Second, with the present trend toward socialization of medicine we selfishly owe it to ourselves to renew our interest and enter the fight against this movement on the front line, not as an uninterested bystander full of complaints and criticisms. Some men say that the County, State and American Medical are only of interest to those men of political ambitions. This I deny and refer you to the address of Dr. M. J. Henry delivered in January 1942 at our annual dinner. The men of medicine call-

President's Address to the Jefferson County Medical Society, January 17, 1944.

ed "Medical politicians" that I have known have all been men sincerely interested in medicine, its future and the doctors of medicine. These men are trying, and any mistake they make is one of judgment and not of lack of interest in us or medicine. They do attend meetings and are rewarded for so doing.

In the third place, we owe it to the men who appear on the programs and give us the best in themselves that we may profit accordingly. No one ever attended a scientific medical meeting that they were not paid for it in knowledge acquired. It is also the courteous thing to do, because some day you may be on the program and feel that you are entitled to an audience.

In the fourth place, there is a side of fellowship about meetings which is certainly worth while. The old truism is still true, "to know one is to like one." So get on the band wagon and let us all pull for a bigger and better County Society.

The year just past has been a good year and I want to again extend to each and every one of you my most sincere thanks for your loyal support. All of our Committees have functioned well and are due an extra pat on the back. No organization can function without the service of a good secretary and the past year you have had a good one. What success we have had this year we owe in great part to our President Elect, Dr. Weeter. His job as Chairman of the Program Committee has been most difficult and he has handled it well. The Society has had a number of Presidents but none the superior of Dr. Harry Weeter.

The coming year he will serve you loyally and with everything in him. Won't you support him faithfully and help make this the best year in the Society's history?

Now in conclusion, I again want to beg of you to support your County Society and thus help American Medicine. Let us all fight together to keep us from again being the "forgotten man."

If the whole country could achieve the low infant mortality rates already attained by some communities, the lives of 40,000 infants a year would be saved, statisticians of the Metropolitan Life Insurance Company said recently. The lives of babies are safest in large cities, and least safe in small cities, the statistics indicate.

"COMPENSATIONITIS" AFTER OCULAR INJURY

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Middlesboro

The initial word in the title of this short paper is put in quotation marks because it is not in the medical directory. I predict that before many years it will acquire the dignity of inclusion with legitimate medical terms, because it fills a need for the succinct expression of a condition regrettably familiar to every physician who has done industrial practice for even a short time. "Compensationitis" may be defined as that infrequent pathological mental or psychic condition, always following injury from which some benefit, usually pecuniary, is or may be, due the the patient and from which he alleges unjustly, that the accruing benefit is inadequate to recompense him for the injury rectived. From this definition, we conclude that a certain opprobrium is attached to the condition, and yet many sincere, reasonable men are afflicted with it. No criticism of the Compensation Law is intended, as its spirit is excellent although its equitable administration in an occasional case is difficult if not impossible.

Given a man who has recovered from the acute phase of an ocular injury incurred while at work. Granted that the condition is complicated by "compensationitis." He states that before the injury the vision of the eye was excellent but that now it is "weak," that he can see but little when he covers the other eye and that the vision in the good eye is excellent. This condition of affairs is not rare. It is imperative to determine, or to attempt to determine, why the man makes the above statements, and what the residual condition of the eye is, not only to consider remedial measures but also to decide what compensation should be granted him. An exhaustive examination with findings and conclusions definitely recorded may enable the oculist to render an impartial decision that is just to the man and to the company which pays the compensation.

When our hypothetical case presents himself to us for examination, we may find a corneal scar which obstructs the pupil or a dislocation of the lens, detachment to the retina, etc. The discovery of any such sight-impairing lesion simplifies the problem, for, by the type and severity

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of the lesion encountered we can judge roughly how much vision remains. In our classification of patients who claim partial loss of visual acuity after injury, this would be group one, in which there is visible, demonstrable organic damage. This group presents no great difficulties.

The second group is that of the malingerer. As far as the eye is concerned, malingering after injury is rare. In other words, not many men attempt deceit, complaining of poor vision in the injured eye as a result of injury though perfectly aware of the presence of excellent vision. Such a man is dishonorable, and as a rule, rather easily exposed, as will be explained below. In our handling of these cases we should have a third group in the classification, and this group will be much larger than the group of malingerers. If the man is thoroughly convinced that the vision is much reduced when in fact the visual apparatus functions normally, he is not a malingerer but a psycho-neurotic. He believes he cannot see normally and so firm is his conviction, that his mind or spirit fails to use the visual apparatus adequately and side-tracking of his mind is necessary to determine the visual acuity. But such a man may be honorable though self-deceived.

A fourth group in our classification of those cases in which there is a loss of visual acuity which the patient believes due to the injury is that in which there was pre-existing loss without the patients having been aware of it. It is hard to believe but a person may have excellent vision of one eye and very poor vision of the other without ever having been cognizant of the fact. An intelligent girl of seventeen failed her test for a driver's license, and without her knowing it, the vision of one eye was less than 20/400 while the vision of the other eye was almost 20/20. Glasses improved the vision of each eye to 20/15. Another young woman, aged thirty, without her knowledge, had but 20/200 vision of one eye from a previous chorio-retinitis, the vision of the other being almost 20/20. In such a case, if the impaired eye is injured, calling the patient's attention sharply to the comparison of the visual acuity of each eye, the gross difference would naturally lead him to believe that the disparity was the result of the injury, whereas in reality it is due to the pre-existing refractive error, amblyopia exanopsia or ocular disease. A man, aged 41, struck in the right eye with a quarter of beef, seven weeks previously, complained of poor vision of the eye, though he believed his eyes had been perfect. Examination revealed excellent eyes but there was compound hyperopic astigmatism and glasses relieved him completely. It was believed that the refractive error would eventually have caused symptoms, that the accident so focused the man's attention on his eyes that the symptoms developed sooner than they might otherwise have done. Another man, aged 68, was exposed to an arc-flash and about five weeks later noticed poor vision of one eye. Examination revealed a thrombosis of the lower temporal branch of the central vein, which was not believed to be the result of the flash. Another man stated a small piece of coal hit his eye. When seen by me about three weeks later, he stated he could not read the 20/400 letter. The small corneal scar, located about mid-way between the limbus and the pupillary margin was not responsible. Ophthalmoscopic examination revealed an old chorio-retinitis.

With these patients the most important questions are: what is the actual visual acuity of the injured eye; is the partial loss due to the organic injury, the psychic injury or to some pre-existing abnormality of which the patient was unaware?

To answer the first question: What is the actual visual acuity of the injured eye? Unfortunately, it is not always wise to rely on the statements of the patient when the good eye is occluded during the reading of test letters at twenty feet. It is wiser to have him read them with both eyes open but with the light rays so altered as to have him believe he is reading with both eyes when in reality he is reading with the bad eye only. This is usually but not always done rather easily. Should the patient close either eye during the testing, the letters should be promptly hidden. To put the matter in bald words we are using a trick in an effort to determine the actual ability of the eye to see. Four methods will be described. The first: seat the patient twenty feet from the test letters. Insert a very heavy spherical convex lens in each side of the trial frame without allowing the frame to be empty at any time, change the lenses gradually diminishing the strength of the lens in front of the eye in question, but not of the good eye. If the patient reads, you may be sure that he is reading with the impaired eye as it is impossible to read through the heavy lens over the good eye. Another method: insert prisms in

the trial-frame, base up in front of one eye and base down in front of the other eye. This will cause a separate image for each eye. Have the patient read the image seen by the impaired eye. A third method: using the special test-letter chart of different colored letters, place a green glass in front of the worse eye and a red glass over the good eye. The red glass blanks out red letters so if the patient reads the red letters it must be with the impaired eye. The fourth and best method is by means of the polaroid outfit with which, with both eyes directed at the test-letters, the rays of light entering one eye can, without the patient's knowledge, be occluded, so that any letters read must be seen with the other eye.

The second question: Is the partial loss due to the organic injury, the psychic injury, or to some pre-existing abnormality of which the patient was unaware? Partial loss due to organic injury is usually visible and demonstrable, alleged loss due to malingering or psycho-neurosis is usually detected, and pre-existing abnormality of which the patient was unaware is usually discovered. Therefore, in general, we may say that adequate examination, as a rule, reveals the true condition.

We come up to an almost unscalable wall when one eye has been enucleated as a result of an injury, if the patient alleges that the vision in the remaining eye has also been damaged by the injury. It may be quite impossible to determine the visual acuity accurately for our deceit tests with lenses, prisms, color chart or polaroid may be absolutely useless if the patient bluntly states that he sees nothing clearly. He may be a miserable malingerer or an honorable psychoneurotic but it is practically impossible to state the degree of loss of vision. We may have to rely on the statements of his friends as to how he manages himself when unobserved.

In conclusion, may I urge the routine determination of the visual acuity of each eye in every employee who is to engage in any type of work in which there is a danger of ocular injury. All that is needed is a test letter card (with symbols for the illiterate) illuminated by a shaded electric bulb, to be read, one eye at a time with the employee at a distance of twenty feet. If an applicant's vision is somewhat less than normal it does not necessarily mean that he is ineligible for the average type of work. In fact, one good eye is adequate for the average person. But the employee with but one good eye should not be allowed a dangerous job which would be even more dangerous because of the smaller field of vision due to his seeing with but one good eye, nor should he be allowed work in which there is a definite danger of sustaining ocular injury. The importance of the recording of the visual acuity before employment can hardly be over estimated for the above reasons alone. There is another reason which in itself would justify the routine. In the occasional case in which litigation impended, a record of the pre-employment visual acuity may be of tremendous value. Some of the cases mentioned above demonstrate the point. We wish to be just and impartial in differentiating between true post-traumatic ocular injury and "compensationitis."

IDENTICAL TWINS WITH PSYCHOSIS

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Louisville

This is a report of identical twins with the same type of Psychosis, involving almost identical systematized delusions of grandeur and paranoid trends. A review of the literature on the subject of the frequency of Psychosis in identical twins is rather scarce, only a few cases having been reported in the literature.

Kollmann reported only one set of identical twins out of three thousand births which he thought deserved general interest on genetics and psychiatric grounds. His case illustrated, as clearly as a laboratory experiment in breeding, the importance of constitutional and dispositional factors in the manifestation of identical and hereditary predisposition to schizophrenia. His case succumbed in unison to a catatonic schizophrenia in spite of the different development of their lives. In his case the twins were separated immediately after birth and reared in different places, by different foster parents, and exposed from their earliest childhood to utterly different conditions of life. This, of course, precluded the possibility that a uniform environment could have influenced the physical and mental development of the twins, whose predispositions were alike by virtue of inheritance. His case proved, almost as accurately as if it had been a set experiment, that definite internal and somatogenic factors must count as dispositional deter-

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minants in the manifestation of a hereditary predisposition to schizophrenia. Psychiatric critics who are oriented exclusively in psychology accept the concept that schizophrenia is an inadequate reaction to an unfavorable environment either entirely or partially to a mental complex derived from a sad and unfavorable experience. Psychiatrists, on the other hand, tend to believe that constitutional research will explain the interplay of the bodily processes responsible for the pathogenesis of schizophrenia.

Lieutenant Jack G. Oatman reported a case of psychosis in identical twins in 1942 in the American Journal of Psychiatry, No. 98, pp 842 to 845, 1941 to 1942. He states that usually one member is the aggressor and may usually exhibit psychotic symptoms earlier. This partner may also communicate the psychosis to the recipient, the more passive. Identical twins are one degree more closely related to each other than ordinary brothers and sisters and there is undoubtedly a greater physical and psychological affinity than in other members of the same family. Furthermore, heredity, environment and training sometimes may differ in only the most superficial details where these influences differ at all. "Having the same mental and physical endowment, developing the same introverted personalities, experiencing the same desires, and checked by the same frustrations, there is no cause for surprise that they utilize the same means of satisfying instinctual drives in relieving autonomic tensions; nor that these unhealthy means of adjustment led them into an almost identical and almost simultaneous psychosis."

Abt quoted Schultz and Osteo to the effect that, "The cause of Psychosis in duplicate twins lies in the high-grade similarity in the structure of the brain so that psychic functions show a parallelism both physiologically and pathologically."

Soukhanoff reported six cases of similar mental diseases in homologous twins in support of his view, "that the similarity of mental processes occurs in health as in the psychosis."

As early as 1883 Savage reported insanity in identical twins. Their histories too were extraordinarily alike. In his experience Parker never found a single instance in which Dementia Praecox occurred in only one of identical twins. If it occurred at all, both were afflicted. He, therefore, deducted from this that the "evidence is strongly in favor of a germinal source, arising from a germinal taint, or maladjustment in the egg cell, sperm cell or both." Thus the presence of the same mental disease in identical twins is strongly in favor of their being uniovular or monozygotic.

The following case of identical twins tends to corroborate also the reports and impressions of the men above mentioned: The twins had a Caesarean birth three weeks before maturity, and are of the same sex. They have identical physiological and psychopathological characteristics. The color of their eyes and their hair is the same, the height is the same, five feet seven and one half inches, however, the weight differs by ten pounds. They have the same B.M.R. of minus six, and the same blood type, which is "O". Both have a hearing of both ears of 15/15. William is right handed and Stuart is left handed. William's electroencephalographic report speaks for a rather basic disturbance. There are no localizing signs. Stuart's, on the other hand, shows "A borderline abnormal electroencephalogram with more stability to hyperventilation than that of his brother. Generally speaking these are two comparable electroencephalograms except for the fact that Stuart has more stability to such a thing as ventilation than his brother, William."

Stuart weighed eight and one quarter pounds while William weighed seven and three quarter pounds at birth. Both were breast fed up to one year. The mother states that the twins have always been excitable and nervous. Even when they were small they could never be still and that she and the nurse had to just make them be quiet because they would get into such an excited state. When they were nine months old, both of them had pyelitis and had convulsions at the same time. Neither of the twins had temper tantrums, fainting spells or night mares, and they did not wet the bed unusually late in their infancy. Neither of the twins could sleep in the same room together. William was shy and timid, and Stuart was indifferent. Neither of them liked school and they did not do well in group activity. They could not mix. They ran away from school innumerable times. Both were high strung, nervous, and unable to concentrate, and were incessantly restless. They had measles, chicken pox and whooping cough when seven years of age. While in the seventh grade, the mother states, Stuart and William had nervous breakdowns.

They were fifteen years of age at the time. They showed a great deal of nervousness, restlessness and they were seclusive. They remained in their rooms and had insomnia. Between the eighth and ninth grades William showed artistic aptitude and proficiency He was accepted in an art school at Sarosota, Fla. However, he was there for only a short time when he jumped from a second story window and came home after wandering about the nearby towns for several days. Stuart showed a great deal of interest and practical ability in electronics, particularly radio. He had taken a correspondence course and has built, according to his mother, several walky-talkies.

When the twins were sixteen years of age they attempted to enlist into the army but the parents discouraged it because of their youth. However, they were drafted when they reached eighteen, (28 July, 1943.) The present crisis in the behavior occurred approximately three months after their induction into the service at Fort Thomas, Kentucky. They went AWOL because they could no longer stand the people about them. Regimentation was "driving them mad." They both left at the same time, and they wandered about separately from town to town, hitch hiked and otherwise lived a life of nomad, staying at the USO and at some civilian home, whom each had met during his itinerary wandering. However, they stated that they had no particular place to go; that their behavior was impulsive, and finally the brothers met again by mere accident at the USO while in Cincinnati. They turned themselves in to the M. P.'s and were taken into custody and returned to the Station Hospital, Fort Thomas, Kentucky.

The twins were admitted to Station Hospital for observation. There they showed abnormal behavior, abnormal thought processes with grandiose delusions, mannerisms, as well as sadistic and masochistic tendencies. They were transferred to Nichols General Hospital, 29 October, 1943, for further study and disposition. Here it was found that William is the dominant half of the twins. He shows periodic agitation, and a push of psychomotor activity as well as nihilistic delusions. The strain of mental activity taken verbatim is as follows: "I left because of the environment. It drove me crazy; the surroundings, the monotony. I was confined to the surroundings, and when I went into town I was just as bored as I was when in camp. It had the same influence. I wanted to escape them. They worried me, they wasted my time, they think I am eccentric and criticise my actions and behavior. I came to that conclusion by the contours of their faces. I am very observing. I observe everything. Nothing gets past my eyes. They thought I was egotistical and felt superior. They threatened to eliminate me so to speak Why? I appeared egotistical and superior. I observed the growing hatred. I could feel a more and more growing hatred toward me, I was too actively confined with them. I would rather accept death than go on in such a continuous pattern. I feel I am normal, I have a nervous condition but after a certain length of time I believe army life would drive me 'off the beam'. Sometimes I am rather afraid of myself because of criminal ideas that come into my mind. I feel I am incapable of these things. I realize that it is incredible but incredible things do happen. I sort of like to experiment with people, I want to contribute anything I can to humanity, but I don't want anything from humanity. I am a leader, not a follower. I like to be left alone. Several times I have thought of killing myself. Basically, I am not a coward, yet I am. When these spells occur I try to think of the brighter things. I believe I have three or four types of personalities. There will be some radical changes made, quite a few in fact. You will see changes regarding the capitalist and the laboring classes, racial trouble, religious differences. There will be class trouble. I think there will be a revolution in this country after the present war. I base my opinions on what I have heard; on what people say who have studied the war and its effect on people. I believe in mercy killing (the patient laughs). I was very frank in that little occupational test. When you come right down to it, the cripples, sick, blind, etc., are consumers, and they should be done away with by mercy killing. We could exterminate them by the millions. I believe it would be the humane thing to do, and in the end there would be better feeling. For instance, for every cripple, three people in the family are called upon to care for him when they could be doing something for the state. Why not exterminate them in a merciful way? I would like to say, as a symbol, of course, that my associates in business, my family, relatives, or otherwise, may have to be eliminated."

Stuart, the other twin, presents similar nihilistic delusions, with a tendency to neologism and grandiose delusions. The

strain of mental activity taken verbatim is as follows: "I was rather depressed of this type of life and still I have no fears of going to another world. I look at death not as a horrible ugly thing, but as opening the door to a new and beautiful world. The streets are shining like glass but on closer observation they are of brilliantly shining gold of the reflection of cosmic rays. The city is surrounded by seven walls of gold. There is a river that flows through the center of the city, and as you enter the gates of each city, there are trees, bearing fruit of precious stones. In the middle of the city there is a black tower and there is a mighty ray that reflects upon the city. The tower has no entrance but does have an exit. It is the center of the known worlds, and its darkness is of darkness that no man's eyes gazed upon. It is the secret of life as known to us. I have been there once, 9 years ago, in April 23, 1943. My purpose there was a special mission to obtain plans for world conquest for 1953. "Apelio" lived at the base of the tower. I obtained these plans for world domination. I shall dominate the world in 1953, thru failure and successes of my fellow beings."

The patient mentioned seven plans, and the consistent feature of each was death and destruction in the last analysis. According to his thinking the above results will be due to underestimation, for he states "Is not underestimation the ruination of the universe, and have we not made it so? Man shall destroy himself. I spoke to "Apelio" in a dead and forgotten language. I cannot speak it now but I can write it, I was chosen and not picked." Why did he pick on you, he was asked? "Four years ago in a history class." Patient became unintelligible and uttered meaningless terms and disconnected thought processes. He continued, "And men shall set forth in his world to seek its light of life. I look at this world merely as a joke." (Patient laughs) "I have three subconscious minds, connected with one physical being. Today I am diomind, dual mind of thoughts of mind. Eccentric thought to the vast majority, and in the actor of life, as far as the vast majority is concerned, I am an actor. Tomorrow, the unknown, I would rather leave this completely blank. I am as sane as the vast majority. When the majority reads this it will think it preferable to place me in an institution for the insane, because the majority underestimates me. The minority is the leader, and the majority are sheep that follow the leader."

Conclusion: These patients are both paranoid praecoxes of long standing, and both have underlying dangerous tendencies. They are potentially homicidal as well as suicidal. Although they have never been violent on the ward, their delusions may reach a point where they will begin to react to them in a violent manner.

Prognosis: In these cases, even with shock therapy, the prognosis should be very guarded because of a true schizophrenia, and not the schizoid type of reaction which these twins present, and because of systematized delusions of grandeur, and because of the duration of abnormal behavior dating back to the ages of eight to ten years.

DISCUSSION

Spafford Ackerly: I think these are cases that have been worked up very well in your hospital and I think they should not be lost to medical literature. Very few twins, breaking down with psychosis at practically the same time, have been recorded.

BOOK REVIEW

MEDICAL CARE OF DISCHARGED HOSPITAL PATIENT: By Frode Jackson, M. D., Instructor in Medicine, Syracuse University College of Medicine, H. G. Weiskotten, M. D., Dean and Professor of Pathology, Syracuse University College of Medicine, Margaret A. Thomas, M. A. (oxon). The Commonwealth Fund, 41 E. 57th St., New York 22, N. Y., Publishers. Price $1.00.

This is the story of a successful experiment in extending the range of a hospital's service, improving the care of chronically ill patients, and relieving congestion in the medical wards. The study was undertaken by the Syracuse University College of Medicine after a preliminary survey had revealed that 90 per cent of the cost of service on the general medical wards at the University Hospital was for chronic illness, and that only a third of these patients were receiving satisfactory medical supervision after discharge.

It was soon found that, because of proper care in the home, many patients could be discharged earlier, and re-hospitalization was greatly reduced. The saving in hospital costs was about three times the cost of the experiment, or, viewed in another light, sufficient hospital facilities were released to permit the acceptance of several hundred additional patients. Of even greater importance was the better medical care received by the patients.

This challenging experience is of interest to hospital administrators, physicians, health officers, welfare leaders, and others concerned with community health.

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NEXT ANNUAL MEETING LEXINGTON,
SEPTEMBER 18, 19, 20, 1944

COUNTY SOCIETY REPORTS

Boyd: The regular meeting of the Boyd County Medical Society was held at 6:30 P. M. on March 7th at the Henry Clay Hotel. William Gambill presided in the absence of the president.

The program was presented by L. H. Winans and Misses Robinette, Isaacs and Winans. L. H. Winans reviewed the conditions and methods of transfusion in the past and discussed some of the modern developments in typing blood and giving transfusions. Miss Winans discussed blood types and blood typing. The sub-groups of blood types were discussed by Miss Isaacs, and Miss Robinette talked about the Rh factor and its relation to transfusion reactions. The program was discussed by several of the members of the society.

L. H. Winans and Price Sewell gave the report of the committee on birth notification which was accepted by all members present.

The application for membership in the society by H. K. Bailey was presented and it was voted by all present to accept Dr. Bailey into the society as a transfer from the Pike County Medical Society.

No further business was presented and the meeting was adjourned.

Price Sewell, Secretary.

Caldwell: At a recent meeting of the Caldwell County Medical Society, held in Princeton, the following officers were elected for the current year: J. M. Moore, president; F. T. Linton, vice-president; W. L. Cash, secretary; W. C. Haydon, delegate to State Association; I. Z. Barber, alternate delegate. Frank P. Giannini, recently located in Princeton for the practice of medicine, was elected to membership in the Caldwell Society.

W. L. Cash, secretary.

Campbell-Kenton: The regular monthly meeting of the Campbell-Kenton County Medical Society was held at the Campbell County Health Center on Thursday, March 2, 1944 with twenty-nine members present. In the absence of the president and vice president, the meeting was called to order by the secretary at 9:10 P. M. The minutes of the last meeting were read and approved.

The following communications were received:

Telegrams from J. H. Pritchett and C. C. Howard about Tuberculosis Bills Nos. 147 and 157. Dr. Van Dermark moved that the secretary send telegrams to Senators Howard and Davis, urging favorable action on these bills. Motion passed. A letter from J. L. Turner, Manager Convention Bureau, Cincinnati Chamber of Commerce, urging us to invite the Southern Medical Association to return to

Cincinnati. C. N. Heisel moved that the Southern Medical Association be invited to return to Cincinnati as our guests in 1944 or any subsequent year. Motion was seconded by Dr. Wehr and passed.

A card of thanks was received from the Slater family.

Dr. Emily R. Hess was unanimously elected to membership.

The paper of the evening consisted of a masterly presentation by Major Vinson Pierce on Penicillin with numerous case reports. It was well received and discussed by Drs. J. H. Caldwell, J. G. Van Dermark, R. L. Biltz, W. G. O'Rourke, A. J. Schwertman, E. B. Mersch, H. R. Molony and G. T. Binkley.

There being no further business, the meeting was adjourned.

Robert L. Biltz, Secretary

Carlisle: The annual meeting of the Carlisle County Medical Society was held in Bardwell, at which time the following officers were elected: President, T. A. Pease; Vice President, G. W. Payne; Secretary-Treasurer, E. E. Smith.

E. E. Smith, Secretary

Fayette: At the December meeting of the Fayette County Medical Society, the following officers were elected for the year 1944: President, Amplias Owen Sisk; Vice President, Carey C. Barrett; Secretary, Charles D. Cawood. Edward J. Murray was elected to the Board of Censors for three years. Charles N. Kavanaugh and J. Farra Van Meter were elected delegates for two years.

In January, the Society voted, as it has for the past two years, to pay the State dues of the 38 members in the armed service.

The Society, at its February meeting, extended an invitation to the Council to hold the annual meeting of the Kentucky State Medical Association in Lexington this year.

At the February meeting of the Society, Charles G. Baker gave a paper on carbon tetrachloride poisoning which occurred at the local air chute factory.

Chas. D. Cawood, Secretary

Four County Medico-Dental: The Four County-Medico-Dental Society met in quarterly session on Tuesday night, February 22, 1944, Princeton, Caldwell County, with supper served at the Methodist Church. Philip F. Barbour, Louisville, discussed Infantile Paralysis and J. Garland Sherrill, Louisville, discussed Fractures and valuable points were elicited.

Officers for 1944 were elected as follows: John G. White, Cerulean, president; E. N. Futrell, Cadiz, vice-president; W. L. Cash, secretary, re-elected. Physicians in attendance: T. Atchison Frazer and L. A. Crosby, Marion; D. J. Travis, C. P. Moseley, Eddyville; G. E. Hatcher, Cerulean; E. N. Futrell, Cadiz; Capt. John Futrell, M. C. Camp Breckinridge; W. C. Haydon, I. Z. Barber, F. P. Giannini, F. T. Linton, L. A. Beardsley, W. L. Cash, Princeton; P. F. Barbour and J. G. Sherrill, Louisville; Dentists: T. W. Lander, Eddyville; Power Wolfe, Princeton.

The Society adjourned to hold its next meeting in Marion, Crittenden County, on the 4th Tuesday night in May 1944, with Dr. Frazer in charge of the arrangements.

W. L. Cash, Secretary.

Greenup: The annual meeting of the Greenup Medical Society was held in Greenup, at which time the following officers were elected: President, H. T. Morris; Vice President, H. H. Holbrook; Secretary-Treasurer, Virgil Skaggs.

Virgil Skaggs, Secretary.

Henry: The regular meeting of the Henry County Medical Society was held at the Castle Hotel, New Castle, February 8, 1944 at 7:30 P. M. Members present were: Drs. J. C. Hartman, O. P. Chapman, W. B. Oldham, G. E. McMunn, W. F. Carter, F. O. Hancock, Cubbage and Skidmore.

Guests present were: Mrs. Karnes, Mrs. Hancock, Mrs. Cubbage, Mrs. McMunn, Mrs. Hartman, Mrs. Carter and Mrs. Carroll. Dr. and Mrs. Karnes were to be the hosts for the meeting but Dr. Karnes found it impossible to attend. Dr. Maurice Bell asked the blessing and a delicious dinner was served. The new president, J. C. Hartman, presided over a short business session in which the minutes of the last meeting were read and approved, and several current issues discussed.

The president suggested that inasmuch as there was no guest speaker for the evening, the members present some case of interest for general discussion and this proved to be a most interesting session.

There being no further business, the meeting adjourned.

Owen Carroll, Secretary.

Jefferson: The 874th stated meeting of the Jefferson County Medical Society was held Monday evening, January 17, at the Pendennis Club with 137 members and guests present.

The President called the meeting to order at 8:00 P. M. and presented the distinguished guests present: Colonel W. W. Southard, Commanding Officer at Nichols General Hospital; Mr. C. P. Loranz, Secretary and General Manager of the Southern Medical Association; Dr. C. C. Risk, Secretary of the Shelby County Medical Society; Lt. Commander Hunt of the Marine Hospital; W. T. Buckner, Shelbyville and Mr. Luther Stein, Vice President of the Belnap Hardware Company.

Mr. Stein represented the American Red Cross and spoke in behalf of the public campaign which is scheduled March 16-27.

Elections were next in order. Upon motion duly made, seconded and passed, Dr. M. G. Buckles' name was added as president-elect to the ballot. Motion was then made, seconded and passed that nominations for president-elect be closed.

Motion was made, seconded and passed that Dr. Charles Maguire's name be added to the list of candidates for Judicial Council. Motion was then made that all nominations be closed; seconded and passed.

The following tellers were appointed: Chairman John W. Heim, Co-Chairman Walter Dean, E. P. Buckley, Armand Cohen, G. P. Dillon, D. M. Embry, C. B. Gettelfinger, R. N. Holbrook, Norvin Casper, Alvin B. Ortner, Kenneth C. Reising, H. C. T. Richmond, Robertson O. Joplin and Eunice Greenwood.

Dr. R. A. Bate of the Necrology Committee read resolutions on the death of E. S. Allen, Jr.

The President, B. W. Smock, addressed the members on "The Forgotten Man." The Secretary read his report which was accepted and filed, the Treasurer read his report which was accepted and filed, the report of the Judicial Council, read by Dr. Walter Hume, was accepted and filed,

The report of the Executive Committee was read by Dr. E. L. Heflin and motion was made, seconded and passed that the report be received and the recommendations adopted.

Harry Weeter gave the report of the Program Committee and announced that the meeting on February 21st will be held at Bowman Field with the Staff of the Station Hospital and the School of Air Evacuation presenting the program.

M. G. Buckles was elected president, A. M. Leigh was elected 1st Vice-President.

The report of the Membership Committee, read by I. N. Kerns, was accepted and filed.

The report of the Library Committee, read by F. G. Speidel, was accepted and filed.

The report of the Medical Economics Committee was given by Dr. Virgil Simpson. He made a motion as a member of the Tuberculosis Advisory Committee of the state that the Society go on record as approving that the proposed tuberculosis sanatorium, when and if built, be placed under control of the State Board of Health. Motion seconded and passed.

Margaret A. Limper was elected 2nd Vice-President. Richard T. Hudson was elected Secretary.

Judicial members elected are: Herman Mahaffey and Frank P. Strickler.

R. A. Bate read the report of the Necrology Committee which was accepted and filed.

Hugh R. Leavell asked for cooperation of the physicians in submitting reports of preventive work done so the Health Agency can use them in the National Health Contest.

The report of the Professional Service Committee was read, accepted and filed.

The report of the Tuberculosis Reference Committee was read by Benjamin L. Brock, accepted and filed.

J. Kenneth Hutcherson was elected treasurer.

Delegates: (Term expires in 1945): Misch Casper, Uly Smith, Morris Weiss.

Alternate Delegates: (Term expires in 1944): Spafford Ackerly, W. H. Allen, Lytle Atherton, M. F. Beard, A. E. Bell, J. Allen Kirk, Carlisle Morse, D. M. Dollar, C. W. Dowden, Jr., H. S. Eggers, Lanier Lukins, R. F. Vogt, H. H. Richeson, Charles F. Wood, F. Buerk Zimmerman.

The meeting adjourned at 9:40 P. M.

R. T. Hudson, Secretary

Jefferson: The 876th stated meeting of the Jefferson County Medical Society was held at Bowman Field Base Hospital on Monday night, February 21, 1944. Approximately 100 members of the Society and a large number of the medical staff from Nichols General Hospital, were present.

The program was conducted by Major Richard Fixott. M. C., Base Surgeon in Charge.

The scientific papers were as follows:

Duties of a Flight Surgeon. Captain Harwood W. Cummings, M. C, Base Flight Surgeon.

A School of Air Evacuation. Major Russell C. Smith.

A Case of Agranulocytosis. Major Herman Tarnower, M. C.

The meeting adjourned at 11:00 P. M. after an informal social affair.

Richard T. Hudson, Secretary.

Letcher: The Letcher County Medical Society met in the Directors' Room of the Bank Building, Whitesburg, Tuesday, February 29, 1944, 7:30 P. M. The following were present: E. K. Munn, F. L. Wommack, H. H. Howze, Richard F. Brady, T. M. Perry, J. W. Turner. John L. Clay, B. C. Bach, J. E. Crawford, R. D. Collins, T. R. Collier, Owen Pigman, Captain Carl Pigman, M. C., Fort Ord, California; and Lee Moore, D. D. S.

The meeting was called to order by the president, T. M. Perry. Minutes of the previous meeting read and adopted. Regular business of the society being disposed of, it was brought to the attention of the members that a previous motion had been passed admitting dentists of the county to associate membership. The house then proceeded to elect Lee Moore, D. D. S., an associate member of the society. Following this, the names of John L. Clay, R. F. McFad-

den, and N. H. Short of Norton, Virginia were presented as candidates for membership.

E. K. Munn was then given charge of the program. He gave an interesting talk on organized medicine or association of physicians and surgeons, stressing the fact, such an organization had been formed by the county medical society of Lake County, Indiana. Discussion by F. L. Wommack, also short talks on the subject by T. M. Perry and Captain Carl Pigman. It was explained in the discussion that this organization had been formed, chartered and working as a unit for about one year, apparently independent of the State and American Medical Association.

The secretary was requested to write the Lake County Association for literature on the subject for each member of the Letcher Society. The meeting adjourned 10:30 P. M.

Owen Pigman, Secretary.

Powell: The annual meeting of the Powell County Medical Society was held in Stanton, at which time the following officers were elected: President, M. L. Knox; Vice President, S. T. Scrivner; Secretary-Treasurer, I. W. Johnson; Delegate, S. T. Scrivner.

I. W. Johnson, Secretary

Rockcastle: The Rockcastle County Medical Society held its regular meeting at the Dixie Boone Hotel, January 7th. This meeting and dinner were sponsored by Dr. and Mrs. N. M. Garrett of Brodhead, and was enjoyed by every one. The hosts due to an urgent call were not able to attend their own dinner of good old country ham. Due to the Flu epidemic no one had time to write a paper and our time was devoted to case reports. The meeting adjourned at 10:00 P. M.

Robt. G. Webb, Secretary.

Rockcastle: The regular meeting of the Rockcastle County Medical Society was held Friday, February 4, 1944 at 6:30 P. M. The Dixie Boone served a fine meal and those present were: Dr. and Mrs. R. H. Lewis and daughter, Mrs. Stewart, Wildie; Dr. and Mrs. N. M. Garrett, Brodhead; Dr. and Mrs. W. E. McWilliams, Brodhead; Dr. and Mrs. Walker Owens, Mt. Vernon, and Dr. and Mrs. T. A. Griffith and son Joseph Vincent, Mt. Vernon. After an enjoyable gathering the Society went to the home of Dr. T. A. Griffith, and the ladies met in the parlor while Dr. T. A. Griffith read a short paper on "Common Enlargements of the Neck" with case report. The doctor scheduled to speak was not present. The meeting, after case reports and business were concluded, adjourned at 9:00 P. M.

Robert G. Webb, Secretary.

Rockcastle: The regular meeting of the Rockcastle County Medical Society was held at the Dixie Boone Hotel March 3rd., with the following members and their wives present: Drs. Pennington and Pennington, W. T. Owens, T. A. Griffith, N. M. Garrett, W. E. McWilliams and R. G. Webb. This meeting and dinner were sponsored by Dr. and Mrs. J. F. Pennington, Mt. Vernon. The banquet was fine and all had a good time. After the business session and a general discussion of politics, a number of interesting obstetrical cases were reported and discussed by all present. Dr. R. G. Webb was designated to write a paper on the Sulfa drugs and their uses at the April meeting. The meeting adjourned at 10:00 P. M. after a very enjoyable evening.

Robert G. Webb, Secretary

Scott: The Scott County Medical Society met at the John Graves Ford Memorial Hospital at Noon, March 2nd, with President L. F. Heath presiding. The following members were present: Drs. Heath, S. S. Ammerson, W. S. Allphin, A. F. Smith, Crutchfield, E. C. Barlow, Jewell and H. V. Johnson. Minutes of previous meeting read and approved.

A telegram from the State Board of Health was read and it was then moved and seconded, that a committee from Scott County Medical Society write to our State Senator and urge him to vote for Senate Bills 147 and 157. Motion carried. Doctors Allphin, Barlow and Johnson appointed a committee to write to our State Senator.

Mrs. Ford, Superintendent of the Hospital gave a report on the X-ray work and stated that owing to the present prices of material, our prices should be raised. Moved and seconded that we recommend to the hospital board that prices of the X-rays be raised $1.00 each, carried.

Dr. P. E. Crutchfield reported an interesting case of a patient he had recently delivered at the hospital, who came in suffering from a pneumococcic meningitis and an acute nephritis.

After a round table discussion of Dr. Crutchfield's most interesting case, the meeting adjourned to meet at noon the first Thursday in April.

H. V. Johnson, Secretary.

Union Medico-Dental: The Union County Medico-Dental Society met at 8:00 P. M. on March 7 in the office of the Union County Health Department. The minutes were read and approved. It was voted to return Dr. Rudy Ruark's dues since he has been accepted into the army and was not eligible to belong to

the State Medical Association. Those present were: G. B. Carr, J. W. Conway, C. B. Graves, D. M. Sloan, Bruce Underwood, H. B. Stewart, H. E. Cottingham, D. D. S., Mr. J. N. Whitsell and Mr. A. L. Bailey.

A motion picture on the One Stage Operation for Carcinoma of the Rectum by Dr. Fred Rankin was shown. A general discussion followed the picture.

There being no further business the meeting adjourned.

Bruce Underwood, Secretary.

IN MEMORIAM



ADOLPH O. PFINGST, M. D.
Louisville
1869 - 1944

Adolph O. Pfingst was born in Louisville, September 8, 1869. After graduating from High School in Louisville and securing a B. A. from the University of Louisville, he entered the medical department from which he obtained his medical degree in 1891. Competitive examination awarded him the appointment of resident in the Louisville City Hospital where he spent a year in rotating service. He then filled an unexpired term on the surgical staff of Mt. Sinaii Hospital, New York, before going to Europe to take up the study of Ophthalmology.

After a year of work in the laboratories at Marburg, pursuing the study of Pathology under Professor Marchand and Bacteriology under Professor Carl Fraenkel, he began his studies in Ophthalmology under Professor Uhthoff and Axenfeld. In 1893-4 he was assistant to Professor Schweiger in the University Eye Clinic in Berlin. While there he wrote his thesis and obtained a "Doctor of Medicine" from the University of Berlin.

In 1895 Dr. Pfingst became assistant to Professor Herman Knapp and House-surgeon to the New York Ophthalmic Institute for a year. He then established himself in Louisville, Kentucky as an Ophthalmologist and associated himself with Bacteriological and Histological Laboratories. He established a reputation as a dynamic instructor and was popular with the student body and in 1906 was promoted to the chair of Professor of Ophthalmology and director of the eye clinic at the Louisville City Hospital. He retired from active teaching in 1938 when the title of Professor Emeritus was conferred upon him.

Dr. Pfingst was a fellow of the American College of Surgeons and was also a member of the American Ophthalmological Society; the Academy of Ophthalmology, Otology and Laryngology; member of the International Society of Ophthalmology and the Pan-American Congress of Ophthalmology. He also held membership in the American and Southern Medical Associations, the Kentucky State and Jefferson County Medical Societies and was active in various medical clubs in Louisville. He was instrumental in organizing the Kentucky State and the Louisville Eye and Ear Societies, each of which he served as president.

Dr. Pfingst was always interested in civic affairs of his home town and was organizer of the first Sight Saving Class in Louisville and he was active in the national movements for the prevention of blindness.

He contributed to scientific medical literature his interest being especially centered on pathological studies of the eye and on diseases and anomolies of intracranial blood vessels.

Since 1930 Dr. Pfingst has had Dr. C. Dwight Townes associated with him in his surgical and office work.

Dr. Pfingst had one daughter, Katherine, who died in 1918. Survived by his wife, Mrs. Lula Salger Pfingst.

A lover of his fellow man, eminent in his profession, erudite in his specialty, possessing a magnetic personality and a charming manner, Dr. Pfingst drew unto himself a large clientele and an ever-widening coterie of friends and admirers who will ever cherish him in loving and grateful memory.

Irvin Abell

JAMES EDWIN BOW, M. D.
1872 - 1944

Dr. James Edwin Bow, Burkesville, died February 24, at the Community Hospital, Glasgow, following a stroke of paralysis.

He was the son of Capt. Isaac Story and Molly Scott Bow, and was born near Burkesville, on April 7, 1872.

Dr. Bow taught in the schools of Cumberland County prior to attending the University of Louisville, where he received his medical degree in 1893.

For the past fifty years he had practiced medicine in Burkesville and throughout the county, administering alike to the rich and poor, both day and night.

The community and entire county is saddened by the great loss they have suffered in his passing.

NEWS ITEMS

The Second "War Conference" of industrial physicians, industrial hygienists and industrial nurses will be held in St. Louis, Missouri, May 8-14, 1944, at the Hotel Jefferson. Many of the new industrial health hazards will be examined and discussed.

Dr. R. R. Slucher, Buechel, was promoted to the rank of Commander and is stationed now at the Bureau of Medicine and Surgery, Navy Department, Washington, D. C.

Dr. Robert Monroe, Louisville, has been promoted to Major and stationed at Maxwell Field, Alabama.

Dr. James R. Stites, Louisville, has recently been promoted to Commander in the United States Naval Reserve. He is the senior medical technician of the Naval Air Center, Memphis, Tennessee.

Dr. William Curry Martin was elected President of the Jewish Hospital Staff, Louisville. Other officers elected are: Vice President, Morris M. Weiss; Secretary, Oscar Bloch, Jr.

The Henry County Medical Society is indeed fortunate in having the cooperation of the leading dentists and veterinarians of their county in attending all their county society meetings, and entertaining the society in their turn.

At the last meeting of the Henry County Medical Society Dr. J. L. Karnes, Veterinarian, New Castle, gave an unusually fine dinner to the society and Drs. R. J. Skidmore, dentist, Campbellsburg, and Otto Cubbage, dentist. Eminence, took part in the discussions.

Dr. E. W. Wyman, dentist, also a member and practicing in New Castle, is now over-seas.

Dr. Marcus H. Sutherland, age 92, a physician of Harrodsburg for sixty years, died in February at the home of his son in Buechel. He established practice after graduating from the old Kentucky School of Medicine in Louisville, and retired seven years ago.

Dr. David Woolfolk Barrow, Lexington, was promoted to Lieutenant Colonel on January 27th. He is now stationed at Elgin Field, Florida.

Dr. John M. Keaney, Sr., age 68, Louisville, coroner since 1934 and a physician for 46 years, died March 5th. He was graduated from the University of Louisville School of Medicine and later studied in New York and Europe. He was serving his third term as County Coroner.

The Midwestern Writers' Conference Association of 410 S. Michigan Ave., Chicago, Illinois, is offering cash prizes for manuscripts from Midwestern writers. The Association (a non-profit organization sponsored by The Cordon, a group of between three and four hundred, most of whom are engaged in the creative arts, and which advances the money for the prizes offered) was formed to establish a line of communication between writers of the Midwest, and to offer recognition, inspiration and encouragement to new writers.

Doctors are eligible for this contest. The closing date is May 10th.

Color Films: The motion picture in color, "Continuous Caudal Analgesia in Obstetrics," which was made available by Eli Lilly and Company, Indianapolis, for showing before medical societies and hospital staffs, has been in continuous demand since release several months ago. It was made at the U. S. Marine Hospital, Staten Island, by authorization of the Surgeon General, U. S. Public Health Service, and the demonstrations were carried out by Drs. Hingson and Edwards, originators of the technic.

The three films that were made at the Nutrition Clinic of the University of Cincinnati in the Hillman Hospital, Birmingham, Alabama, under the joint auspices of the Department of Internal Medicine at the University of Cincinnati and the University Hospitals of Cleveland have likewise been in constant circulation. One of these deals with thiamin chloride deficiency, one with nicotinic acid deficiency, and the third with ariboflavinosis.

None of the films contain advertising. They are available to physicians for showing before medical societies and hospital staffs.



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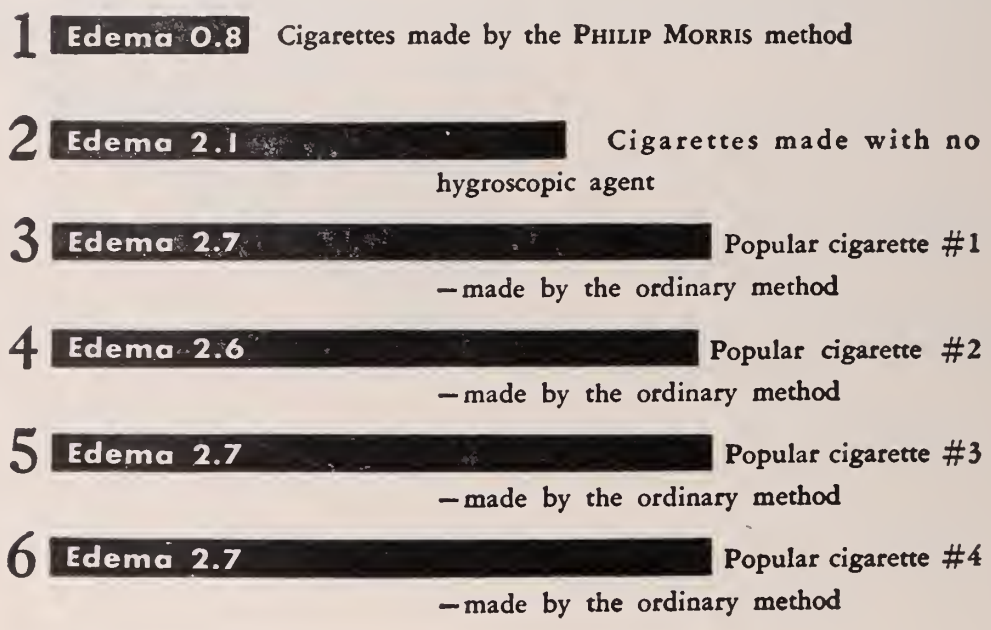
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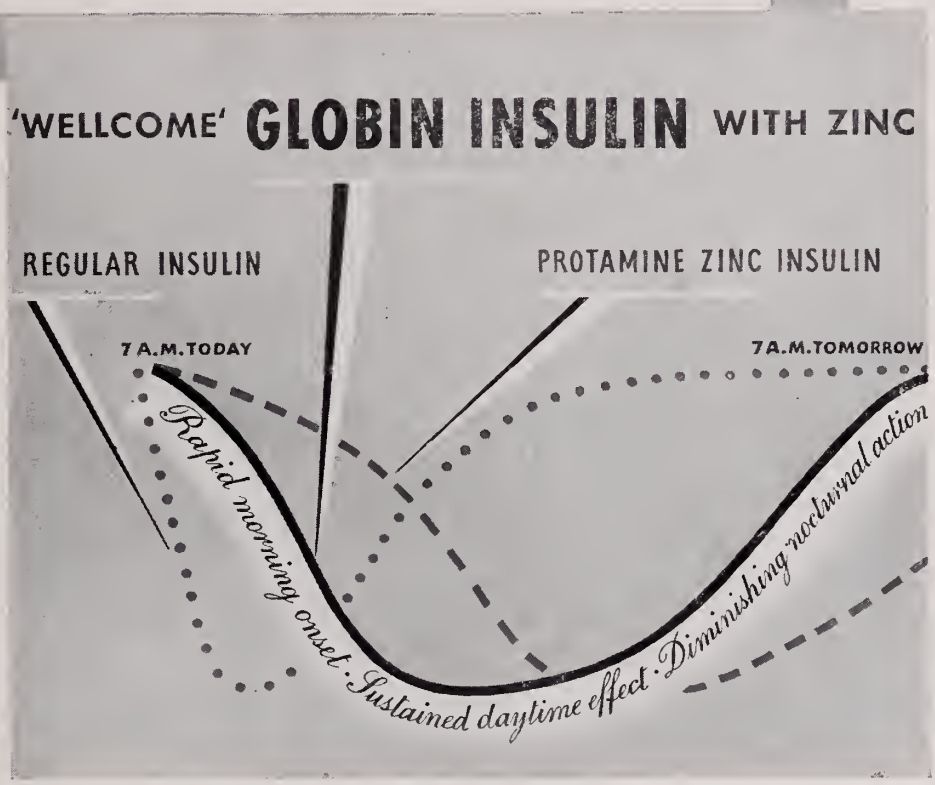


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VOL. 42, NO. 5 BOWLING GREEN, KY. MAY, 1944

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CALENDAR OF COUNTY SOCIETY MEETINGS

COUNTY	SECRETARY	RESIDENCE	DATE
Adair	W. Todd Jefferies	Columbia	May 3
Allen	A. O. Miller	Scottsville	May 24
Anderson	J. B. Lyen	Lawrenceburg	May 1
Ballard	F. H. Russell	Wickliffe	May 9
Barren	C. R. Markwood	Glasgow	May 17
Bath	H. S. Gilmore	Owingsville	May 8
Bell	Edward S. Wilson	Pineville	May 12
Boone	R. E. Ryle	Walton	May 17
Bourbon	George M. Jewell	Paris	May 18
Boyd	Price Sewell, Jr.	Ashland	May 2
Boyle	P. C. Sanders	Danville	May 16
Bracken-Pendleton	W. A. McKenney	Falmouth	May 25
Breathitt	M. E. Hoge	Jackson	May 16
Breckinridge	J. E. Kincheloe	Hardinsburg	
Bullitt	George B. Hill	Mt. Washington	
Butler	D. G. Miller, Jr.	Morgantown	May 3
Caldwell	W. L. Cash	Princeton	May 2
Calloway	J. A. Outland	Murray	
Campbell-Kenton	Robert L. Biltz	Newport	May 4
Carlisle	E. E. Smith	Bardwell	May 2
Carroll	H. Carl Boylen	Carrollton	
Carter	Don E. Wilder	Grayson	May 9
Casey	Wm. J. Sweeney	Liberty	May 25
Christian	H. B. Stone	Hopkinsville	May 16
Clark	W. Carl Grant	Winchester	May 19
Clay	L. H. Wagers	Manchester	
Clinton	S. F. Stephenson	Albany	May 20
Crittenden	C. G. Moreland	Marion	May 8
Cumberland	W. F. Owsley	Burkesville	May 3
Daviess	Frank J. Condon	Owensboro	May 9 & 23
Estill	Virginia Wallace	Irvine	May 10
Fayette	Charles D. Cawood	Lexington	May 9
Fleming	Roy Orsburn	Flemingsburg	May 10
Floyd	Robert Sirkle	Weeksbury	May 31
Franklin	E. K. Martin	Frankfort	May 4
Fulton	John G. Samuels	Hickman	May 10
Gallatin	J. M. Stallard	Sparta	May 18
Garrard	J. E. Edwards	Lancaster	May 18
Grant	Wallace Byrd	Williamstown	May 17
Graves	H. H. Hunt	Mayfield	May 2
Grayson	E. B. Deweese	Caneyville	
Green	S. J. Simmons	Greensburg	May 1
Greenup	Virgil Skaggs	Russell	May 12
Hancock	F. M. Griffin	Hawesville	May 1
Hardin	D. E. McClure	Elizabethtown	May 11
Harlan	W. R. Parks	Harlan	May 20
Harrison	W. B. Moore	Cynthiana	May 1
Hart	Vinson Corrao	Munfordville	May 2
Henderson	Walter L. O'Nan	Henderson	May 8 & 22
Henry	Owen Carroll	New Castle	May 11
Hickman	H. E. Titsworth	Clinton	May 4
Hopkins	Wm. H. Garnier	Madisonville	May 11
Jefferson	Richard T. Hudson	Louisville	May 1 & 15
Jessamine	J. A. VanArsdall	Nicholasville	May 18
Johnson	Paul B. Hall, Act. Sec.	Paintsville	May 22
Knox	T. R. Davies	Barbourville	May 18
Laurel	Oscar D. Brock	London	May 10
Lawrence	L. S. Hayes	Louisa	May 15
Lee	A. B. Hoskins	Beattyville	May 13
Letcher	Owen Pigman	Whitesburg	May 30
Lewis	Elwood Esham	Vanceburg	May 15
Lincoln	Lewis J. Jones	Hustonville	May 19
Livingston	T. L. Radcliffe	Smithland	
Logan	E. M. Thompson	Russellville	
Lyon	H. H. Woodson	Eddyville	May 2
McCracken	Leon Higdon	Paducah	May 24
McCreary	R. M. Smith	Stearns	May 1
McLean	F. L. Johnson	Livermore	May 11
Madison	Scott McGuire, Jr.	Berea	May 18
Magoffin	Lloyd M. Hall	Salyersville	
Marion	Nelson D. Widmer	Lebanon	May 23
Marshall	S. L. Henson	Benton	May 17

COUNTY	SECRETARY	RESIDENCE	DATE
Mason	C. W. Christine	Maysville	May 10
Menifee	E. T. Riley	Frenchburg	
Mercer	J. Tom Price	Harrodsburg	May 9
Metcalfe	E. S. Dunham	Edmonton	
Monroe	Geo. E. Bushong	Tompkinsville	
Montgomery	D. H. Bush	Mt. Sterling	May 9
Muhlenberg	E. L. Gates	Greenville	May 9
Nelson	Keith Crume	Bardstown	
Nicholas	T. P. Scott	Carlisle	May 15
Ohio	Oscar Allen	McHenry	May 3
Owen	K. S. McBee	Owenton	May 4
Owsley	W. H. Gibson	Booneville	May 1
Perry	J. P. Boggs	Hazard	May 8
Pike	S. B. Casebolt	Pikeville	May 4
Powell	I. W. Johnson	Stanton	May 1
Pulaski	Robert G. Richardson	Somerset	May 11
Robertson	Logan T. Lanham	Mt. Olivet	
Rockcastle	Robert G. Webb	Livingston	May 5
Rowan	I. M. Garred	Morehead	May 8
Russell	J. R. Popplewell	Jamestown	May 8
Scott	H. V. Johnson	Georgetown	May 4
Shelby	C. C. Risk	Shelbyville	May 18
Simpson	N. C. Witt	Franklin	May 9
Spencer	M. H. Skaggs	Taylorsville	
Taylor	L. S. Hall	Campbellsville	May 4
Todd	B. E. Boone, Jr.	Elkton	May 3
Trigg	Elias Futrell	Cadiz	
Union	E. Bruce Underwood	Morganfield	May 2
Warren-Edmonson	Paul Q. Peterson	Bowling Green	May 10
Washington	J. H. Hopper	Willisburg	May 17
Wayne	Frank L. Duncan	Monticello	
Webster	C. M. Smith	Dixon	May 26
Whitley	C. A. Moss	Williamsburg	May 4
Wolfe	John L. Cox	Campton	May 1
Woodford	George H. Gregory	Versailles	May 4

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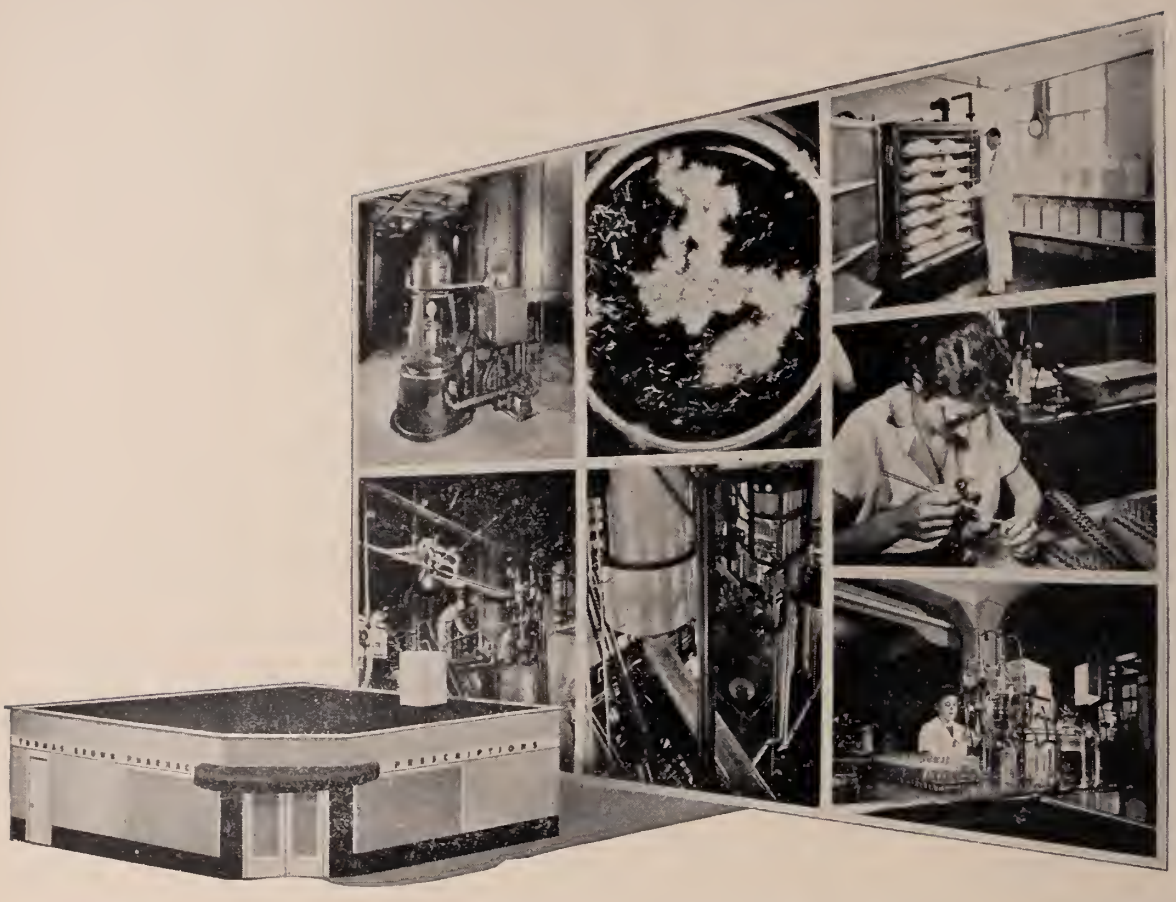
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KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

Published Under the Auspices of the Council

VOL. 42, NO. 5 BOWLING GREEN, KY. MAY, 1944

SENATE BILL 1161

Probably the most significant development in connection with the attitudes of the public and the professions toward the Murray-Wagner-Dingell Bill is a recent report of the Committee from the American Bar Association. This report was published in full in the Journal of the American Medical Association (March 11, page 716). Each member of the Kentucky State Medical Association should see and read this important report. In order to give further emphasis to this Committee analysis of the Bill, we are reproducing the conclusion of the Committee, which follows:

CONCLUSION

"The American Bar Association is limited to an expression of opinion and judgment with respect to those fields which relate to the administration of justice and which directly affect the safeguards and protection of the rights and liberties of the citizens of this country. Under normal circumstances, therefore, it is not the function of this Association to attempt to influence substantive legislation by the Congress of the United States. But when under the pretext of the general welfare legislation is proposed in Congress which either inadvertently or with deliberate subtlety constitutes a direct attack on the rights and liberties of the citizens of this country, it becomes the duty of this Association actively to voice its objections, a summary of which is as follows:

1. Local self-government must be preserved in our federal system. State governments directly responsible to the will of the people are best adapted to exercise such supervisory control as may be instituted over the health and medical care of our citizens.

2. S. 1161 seeks to invest in the Surgeon General who is not an elected servant of the people and who is not amenable to their will the power arbitrarily to make rules and regulations having the force and effect of law which directly affect every home.

3. The measure furnishes the instrumentality by which physicians for their practice, hospitals for their continued existence and citizens for their health and that of their families can be made to serve the purposes of a federal agency.

4. The bill fails to safeguard the rights of patients, citizens, hospitals or doctors with respect to disputes arising or rights denied through the arbitrary or capricious action of one man.

5. The bill fails to provide for any appeal to any court from the action of the Surgeon General.

6. The vicious system whereby administrative officials judge without court review the actions of their subordinates in carrying out orders issued to them is extended in this bill to a point foreign to our system of government and incompatible with the adequate protection of the liberties of the people.

The Constitution of the United States is designed to protect the citizens of this republic in the exercise of the rights of free men. The provisions of that instrument can be rendered impotent, when our citizens, for the sake of an apparent immediate benefit, surrender to their government such direct control over their lives that government, by imposing a constant fear upon them of having those benefits withheld or withdrawn, can compel from them obedience and subservience to its dictates."

Civic organizations in the state are evidencing a keen interest in this proposed legislation and doctors should unhesitatingly respond to any invitation to bring the facts of this bill before the public.

THE 1944 PROGRAM

The Scientific Program for the 1943 Annual Meeting met with such a hearty response and there have been so many requests from physicians in attendance last year that the Committee on Scientific Programs has unanimously agreed to arrange for another War Time Graduate Medical Meeting for the Annual Session, September 18, 19 and 20, 1944. It will be recalled that these meetings are sponsored by the American Medical Association, the American College of Physicians and the American College of Surgeons, and the local committee, with the cooperation of the regional committee, will have the assistance of these medical organizations in securing the very best talent possible for the meeting.

Under tentative consideration for the meeting are the following topics:

1. Penicillin.
2. Psychosomatic Medicine.
3. Chemotherapy in Pediatrics.
4. Cardiovascular Diseases.
5. The Present Status of Pain Relief in Labor.
6. Arthritis.
7. Prevention and Treatment of Wound Infections.
8. General Surgical Approach to the Abdomen.
9. Industrial Health Hazards.
10. Tropical Diseases: Their Significance as a Wartime Menace.

There will, of course, be other topics considered as contact is made with representatives of the sponsoring organizations.

Since the meeting is in September, it is anticipated that the program will be completed in time for publication in the Journal for July.

THE PEOPLE'S ATTITUDE TOWARD MEDICAL SERVICE

The National Physicians Committee recently published a booklet entitled, The American People, What They Think About Doctors, Medical Care and Prepayment Plans, A Challenge to Private Enterprise. This constitutes "A statement of the People's attitude toward 'Political Medicine' and tabulations of the data resulting from the most comprehensive survey of opinion on medical care ever made in the United States."

The leading editorial in the Journal of the American Medical Association of March 11th is devoted to an analysis of the report contained in this booklet, copies of which may be secured from the National Physicians Committee for the Extension of Medical Service, The Pittsfield Building, Chicago 2, Illinois.

CURRENT COMMENTS

House Bill No. 147, entitled "An Act making provision for State Tuberculosis Sanatoria," passed both Houses of the recent General Assembly, has been signed by the Governor and is now a law. There was probably no legislation proposed in the recent Session that had more popular support. There were evidenced a statewide interest and awareness of need for more adequate hospitalization and its effect on the members of the Legislature is reflected in the fact that there was unanimous support for the bill.

A companion bill, H. R. 157, providing for additional moving picture tax, failed of passage and no direct appropriation was made for the cost of construction of these sanatoria, but it is anticipated that a succeeding Session will provide adequately for this.

The bill provides for a commission to be known as the Tuberculosis Sanatoria Commission of Kentucky, consisting of twelve members who shall be appointed by the Governor, four of whom shall be medical members; three appointed from the membership of the Kentucky State Medical Association, the Commissioner of Health, by virtue of his office, constituting the fourth. The bill further provides for a board of commissioners for each sanatorium, consisting of five members, two of whom shall be physicians, members in good standing of the Kentucky State Medical Association. This bill very wisely provides that the Medical Director for each sanatorium shall have had at least five years of clinical experience in the field of tuberculosis and that he shall be in good professional standing.

When this legislation becomes effective and these hospitals are constructed, with funds available for maintenance of patients for medical and surgical care, it will meet a need that has been stressed by the Kentucky State Medical Association for many years.

For the information of Program Committees of County Medical Societies, attention is called to the fact that two films, PSYCHIATRY IN ACTION and LIFE BEGINS AGAIN, showing what has been done in Britain in the field of rehabilitation, are available for medical groups.

PSYCHIATRY IN ACTION illustrates the wartime application of psychiatry to neuroses, both in servicemen and civilians. (Running time 60 minutes, service fee $2.00). The film has been adopted in this country by the American Psychiatric Association.

LIFE BEGINS AGAIN gives an account of new methods of rehabilitation for men injured in industry or in the Forces. (Running time 21 minutes, service fee 75c).

Full information on these films may be secured from British Information Services, 360 North Michigan Avenue, Chicago 1, Illinois.

The American Board of Obstetrics and Gynecology announces the general oral and pathology examinations (Part II) for all candidates will be conducted at the William Penn Hotel, Pittsburgh, June 7-13, 1944. Formal notices of the exact time of the candidate's examination will be sent several weeks in advance. The Office of the Surgeon General, U. S. Army, has issued instructions that men in service, eligible for Board examinations, apply and request orders to Detached Duty for the purpose of taking these examinations.

Further information may be secured by writing Dr. Joseph A. Happ, Secretary, 121 University Place, Pittsburgh, 13.

The American Medical Association will meet in Chicago June 12th to 16th with headquarters at the Palmer House. The Scientific and Technical Exhibits will be at the Stevens Hotel. A visit to the exhibits alone is equal to a liberal postgraduate course.

It is necessary that every physician who is planning to attend the convention to engage his room, and then two weeks before the date of the meeting should arrange for transportation. Not only hotels, but trains are crowded.

At this meeting there will be nationally and inter-nationally known speakers and the subjects will be discussed that meet the needs of every type of specialty, including the old-fashioned general practitioner.

ORIGINAL ARTICLES

SHOCK

EUGENE A. STEAD, JR., M. D.
Atlanta, Ga.

To the uninitiated the literature on shock is apt to appear confusing and contradictory. This is true because in clinical medicine shock has been used as a descriptive term characterizing any acute or prolonged generalized circulatory failure other than congestive heart failure. When one said that a patient was in shock, one merely described the gross appearance of the patient. It meant that the patient was pale, sweating, anxious, with low arterial pressure, narrow pulse pressure and cold clammy extremities. The word shock, as generally used in the literature of the last twenty years, had no physiological connotation. It simply stated in a word that the cardiac output was low and that as a result of the failure of the circulation the patient tended to be cold, pale and pulseless. We didn't worry about why the circulation had failed. When we said shock, we just meant that it had failed.

It is now recognized that this picture of circulatory failure which we call shock can be produced by a variety of different mechanisms, which have little in common. I wish to review the various paths which lead to this common end picture called shock. We will describe the clinical aspects of the circulatory failure produced by extreme tachycardia, by myocardial infarction, by acute infections, by peritonitis, by hemorrhage, by pulmonic emboli and by fainting, and will briefly analyze the disturbances in function producing the circulatory failure.

Sitting in a comfortable arm chair, we would say that the picture of a marked decrease in cardiac output could be produced by two main paths; first, by inability of the heart to pump out the normal amount of blood because of weakness of the heart itself; second, by inability of the heart to pump out blood, not because of weakness of the heart, but because the venous inflow to the heart has failed. The heart can only pump out the blood which it received. The first question to be answered, then, is how often is the clinical picture which we call shock produced by heart failure and how often is it produced by failure of the venous return to the heart. In other words, how often is the circulatory failure central and how

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often is it peripheral. Let us answer this question by considering a few of the conditions in which the clinical picture of shock occurs.

Patients with very rapid heart rates from paroxysmal auricular tachycardia, ventricular tachycardia or auricular flutter may present the classical symptoms of shock. They are pale, sweating, confused, with a narrow pulse pressure. All of the signs of a decreased cardiac output are present. The heart is not functioning efficiently as a pump because diastole is too short to allow filling of the heart. The clinician states that the patient has shock, that is, a poor circulation; the physiologist says the patient's heart is not functioning normally because of the tachycardia. Slowing of the heart improves the circulation and cures the shock.

Patients with a marked decrease in cardiac output because of a recent massive infarction of the left ventricle present the classical picture of shock. The venous return to the heart is normal, but the heart is too weakened to maintain an adequate circulation. Increasing the venous pressure by transfusions or decreasing it by venesection has little effect on the cardiac output because the heart itself is at fault.

Patients with acute infectious diseases, as pneumonia, frequently have circulatory failure before death. Because the usual picture of congestive failure is absent and because the circulation does not improve with the administration of digitalis, it is usually stated that the patients have peripheral circulatory failure or shock, and that the cardiac output decreases because the venous return fails. Dr. Ebert and I studied a group of these patients with infectious diseases and circulatory failure. Observations were made on every patient with infectious disease who appeared critically ill. By staying constantly with these patients it was possible to make observations before and during the period of circulatory failure. When the course was unfavorable the circulation failed and the patients became cold and pale, the systolic blood pressure dropped and the pulse pressure narrowed. At this time the doctor in charge invariably made the diagnosis of peripheral circulatory failure or shock. Studies of the blood at this time showed a normal plasma volume with no evidence of hemoconcentration. The vasomotor centers were functioning normally because blocking the nerves to the cold extremity would cause the extremity to become warmer. These studies eliminated failure of the vasomotor centers or hemoconcentration as the cause of the circulatory failure. The possibility still existed that the shock might be caused by failure of the venous return because of pooling of blood in dilated splanchnic veins. If pooling of blood in dilated veins and a decrease in effective venous pressure in the right auricle were responsible for the circulatory failure, raising the venous pressure would improve the circulation. The venous pressure was, therefore, recorded by inserting a needle in the external jugular or femoral veins. Plasma and blood were then given rapidly until the veins of the body were engorged and until the venous pressure was elevated. The circulation did not improve, demonstrating that the failure of the heart to pump blood was not caused by an inadequate venous return. The data demonstrated that the heart was at least in part at fault and that the circulation could not be restored to normal by raising the venous pressure. Other studies have shown that none of the circulatory system was functioning normally. The infection had produced metabolic disturbances in cell metabolism throughout the body and the cells were slowly dying. The circulatory failure was secondary to a general failure in metabolism. Treatment with transfusions and digitalis was useless. If the infection could be controlled, the circulation improved. It it could not be, the patient died.

In summary it can be said that the clinical picture of shock can be caused by rapid paroxysmal tachycardias, by acute myocardial infarction or by infectious diseases. In these instances the circulatory failure is primarily related to poor function of the heart. The peripheral circulation is inadequate because the heart is not able to pump blood normally. The clinical diagnosis is shock, the physiological diagnosis is heart failure. This condition can be differentiated from peripheral circulatory failure in which the heart is not affected by (1) the response to increasing the plasma volume, and (2) the response to bleeding. If the circulatory failure is caused by decrease in venous return, filling the venous system will improve the circulation; if it is caused by failure of the heart, increasing the blood volume and venous pressure will have little effect. If the circulatory failure is caused by a decrease in venous return, venesection will aggravate the condition.

If it is caused by failure of the heart, venesection is tolerated well.

A patient with a perforated peptic ulcer who enters the hospital twelve hours after perforation will usually be in shock. He is pale, sweating, mentally confused, and has a low arterial pressure with a narrow pulse pressure. Examination of the blood will show marked hemoconcentration, and a striking decrease in plasma volume and the quantity of circulating plasma protein. The circulation has failed because the blood volume has decreased to so great an extent that the venous return to the heart is inadequate. The heart is capable of pumping blood, but it is not receiving the blood to pump. This can be proven by giving a large infusion of plasma. As the plasma volume rises, the venous return to the heart increases and the circulation rapidly returns to normal. The patient is dramatically improved. The cause of the hemoconcentration and the decrease in the quantity of plasma in the blood stream is not difficult to find. The abdomen contains from 3 to 5 liters of fluid which has a protein concentration of about 4 gm.%. The chemical irritation caused by the leakage of gastric juice over the peritoneal cavity has altered the permeability of the capillaries and plasma has leaked from the blood stream into the peritoneal cavity.

The patient is taken to the operating room and the perforation in the gastrointestinal tract is closed. The condition of the patient remains good for twenty-four hours, but at this time evidence of generalized peritonitis is present and the course from then on is progressively downward. Plasma transfusions are continued but the circulation again fails. The patient is once more pale, cold, with a weak thready pulse. At this time there is no hemoconcentration and the plasma volume is normal. Further transfusions are without value because the circulatory failure is now caused, not by a decrease in blood volume, but by the alterations in cell metabolism caused by the infection. The fact that raising the venous pressure does not improve the circulation is proof that the heart is now failing.

Patients with hemorrhage develop circulatory failure which is peripheral in origin. The decrease in blood volume causes a fall in venous return with the resultant fall in cardiac output. Transfusion of blood or plasma restores the circulation to normal.

Thus we see that any marked decrease in blood volume, be it from loss of plasma because of local damage to capillaries from burns, peritonitis or trauma, or from loss of blood by hemorrhage or from loss of fluid by dehydration will cause circulatory failure, and that this circulatory failure occurs in the presence of a heart which is capable of functioning normally. If the inadequate circulation persists for a sufficient length of time, it is found that the circulatory insufficiency is no longer readily reversed by transfusions and in time the condition becomes completely irreversible.

This condition of irreversible shock has puzzled clinicians and physiologists alike. For a time it was believed that the capillaries throughout the body became more permeable because of the circulatory insufficiency and that the shock became irreversible because any fluid placed in the vascular bed immediately leaked out. This thesis seemed plausible because, knowing that any injury to the capillaries by trauma or burns or chemicals would cause the capillaries in the injured part to become abnormally permeable to protein, it seemed logical that generalized circulatory failure might injure all of the capillaries throughout the body and cause the entire capillary bed even at a distance from the injury to leak protein freely. This view was supported by the observation that complete ischemia to a part did cause local capillary damage and increased capillary permeability.

Studies on patients with circulatory failure from trauma, burns, and infection have shown that the capillaries distant to the point of injury do not become abnormally permeable to protein because of prolonged circulatory failure. Only the capillaries at the site of injury leak protein freely. The cells of the blood vessels seem to be tougher than the cells in certain other organs, particularly the brain. In generalized circulatory failure, the central nervous system becomes depressed and the respirations stop before the capillaries throughout the body are injured sufficiently to leak protein. Similar observations have been made on the effects of oxygen lack on capillary permeability. If the capillaries to a part are completely deprived of oxygen, capillary damage results and the capillaries in the anoxic part leak protein freely. If an unanesthetized patient is studied, it is found that progressive oxygen unsaturation of the arterial blood causes marked derangement in cerebral function before there is a detectable alteration in capillary permeability throughout the body.

What then is the cause of irreversible shock? It appears to be caused by irreversible changes in the metabolism of cells throughout the body because of the prolonged circulatory insufficiency. When the circulation is inadequate, none of the cells of the body function normally. In time these metabolic disturbances become irreversible and the cells begin to die. At this time increasing the venous return to the heart and elevating the venous pressure does not restore the cardiac output to normal. Thus the cells of the heart are also affected and this in part accounts for the circulatory failure. The situation is similar to that seen in circulatory failure caused by infection. In so called irreversible shock, the cells of the body are dying because of abnormalities in metabolism produced by prolonged circulatory failure. In uncontrolled infections the cells are dying because the growth of the bacteria has interfered with the enzyme systems of the cells. In neither case will transfusions restore the circulation to normal.

Patients with massive pulmonary emboli blocking both pulmonary arteries present the clinical picture of shock. The peripheral circulation disappears because the left heart is no longer receiving any blood from the right heart. The clinical diagnosis is shock, but the physician does not mean that a failure of venous return to the right heart has caused the circulatory failure. He simply means that blood is no longer flowing peripherally.

Acute circulatory collapse (primary shock) accompanied by syncope (common faint) produces the clinical picture of shock. If the circulatory failure is of short duration, the extremities remain warm. If it is more prolonged, the extremities may become as cold as in any other form of failure of the circulation. Acute circulatory collapse usually results from the following two mechanisms, either alone or in combination: (1) vasodepressor reflexes, initiated by afferent stimuli from any sensory nerve ending or from the emotional content of thought, cause a marked fall in arterial pressure; (2) drugs, infection, excessive fatigue cause a loss of venous tone so that in the upright position an excessive amount of blood accumulates in the venous system below the heart.

Summary

In conclusion it is suggested that much of the literature on shock will become clearer if it is remembered that as used by the clinician the term shock has no physiological connotations. It simply describes a clinical picture which may be caused by a variety of mechanisms which produce circulatory failure. Careful study will reveal whether the circulatory failure is caused by a disturbance in cardiac function, as in paroxysmal tachycardias; by heart disease, as in acute myocardial infarction; by generalized damage to cell metabolism, as in infectious diseases and prolonged circulatory failure; by decrease in blood volume after hemorrhage, trauma, burn or peritonitis; by reflex vasodilatation and pooling of blood from gravity, as in common fainting.

INTESTINAL OBSTRUCTION

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Intestinal obstruction is a fairly common surgical condition and still remains serious. Two or three decades ago, the mortality rate in the various types of intestinal obstruction was as high as 30 or 40 per cent. Since the introduction of intestinal decompression by Wangensteen, the mortality rate has dropped to about one-third of this original level. As will be discussed later, however, many precautions must be taken in the use of intestinal decompression; if it is used unwisely the mortality rate may actually be higher than without the use of decompression.

Pathogenesis of Toxicity in Intestinal Obstruction

There are two major explanations for the serious effects resulting from intestinal obstruction, namely: (1) dehydration, and (2) toxemia.

Dehydration is brought about by vomiting of intestinal contents and by the failure to take food during the illness created by the obstruction. One can readily see that the loss may be appreciable, since the amount of vomitus may be considerable and is naturally a loss in addition to the failure of intake. Depletion of chlorides also takes place concomitantly with dehydration. Numerous chemical changes including increase in the N P N, concentration of blood with increase in the erythrocytes, etc., may take place. Ordinarily, dehydration and loss of electrolytes is produced to a much greater degree in patients with high obstruction than in those with low obstruction.

There is considerable difference of opinion as to the actual presence of a true

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toxemia in intestinal obstruction. However, it is fairly well agreed that in the presence of distention a true toxemia may develop. At any rate, it is well known that if distention can be prevented, this toxemia does not develop. Presumably when a loop of intestine is distended (particularly the lower bowel), the stasis of blood, lymph, etc., in the wall itself results in factors which may change the permeability of the intestinal mucosa. This increase in permeability of the mucosa may allow absorption of intestinal contents. It seems quite obvious that this increase in permeability might take place adjacent to areas of gangrene thereby making it advisable to perform wide resection, if resection is indicated. It is also possible that the stasis of blood and lymph in the wall of the intestines may give rise to the formation of a toxin in the wall itself. However, the theory expressed several decades ago, that the contents of the intestine became more toxic, has been disproved by the work of Wangensteen and others.

In the presence of gangrene, absorption of toxic fluid through adjacent peritoneal surfaces may actually take place. Comparatively slow absorption would take place from the borderline between the gangrenous and viable intestine. This one factor alone, namely, absorption of toxic products across the peritoneum is ample reason to demand an immediate operation when gangrene has developed.

Diagnosis

It is not our intention to discuss the clinical manifestations of intestinal obstruction since they are well known by all. However, there are a few points regarding some of the symptoms which are worthy of emphasis. I refer particularly to consideration of the value of the type of pain in making a diagnosis. It does not seem to be appreciated sufficiently that the pain of intestinal obstruction is very unique, and in fact is simulated by practically no other condition. Characteristically, it is a cramp-like pain which comes on in a spasm lasting for a few minutes and decreasing in intensity or perhaps disappearing entirely. It is not sufficient to take the patient's word for his description of his pain as being "cramp-like" since his definition of cramping pain may be entirely different from ours. One or two questions regarding the type of pain, defining cramping pain in your own terminology will then clarify the type of pain actually present. Ordinarily, it is fairly severe but in itself is not sufficient to demand narcosis. It is well known, however, that if gangrene develops, pain increases and becomes more continuous. This feature will be discussed later.

Nausea and vomiting is a fairly constant accompaniment of intestinal obstruction, but is usually limited to obstruction in the small intestine. It is well known that a complete obstruction may exist in the colon for two or three days in the complete absence of vomiting. On the contrary, a complete obstruction high in the intestine almost invariably results in vomiting a few hours after it has developed. As in acute appendicitis, the sequence of pain and vomiting is important insofar as pain almost invariably develops before the nausea or vomiting.

Ordinarily, distention is a fairly common accompaniment of intestinal obstruction. However, it must be emphasized that in obstruction of the upper small intestine, distention may be completely absent. With few exceptions, distention will be pronounced if complete obstruction is present in the large bowel, largely because gas and fluid cannot regurgitate back through the ileocecal valve and be eliminated by vomiting.

Although complete constipation is thought of as being a prerequisite in the consideration of manifestations of intestinal obstruction, there are, of course, many exceptions to this feature. On many occasions, the obstruction may be partial, and the number of bowel movements actually increased, although probably of liquid consistency. On other occasions, the patient may have one or more bowel movements 12 to 18 hours after development of the complete obstruction, but limited to evacuation of the bowel distal to the point of obstruction.

With few exceptions (e.g. obese individuals) patients with complete or fairly complete obstruction below the upper limits of the small intestine will have a visible intestinal pattern. Distended loops of bowel can usually be seen through the abdominal wall. When these masses are observed for several minutes, peristaltic waves may be observed. Naturally, it must be realized that a normal peristaltic wave may be visible through the abdominal wall in infants or adults with unusually thin structures in the anterior abdominal wall.

Treatment

Treatment of intestinal obstruction is divided into two major phases, namely,

(1) intestinal decompression, and (2) operation. The principles of the former treatment, as originally developed by Wangensteen, have changed but little.

Intestinal Decompression: As previously stated, intestinal decompression has resulted in a very sharp decrease in the mortality rate of intestinal obstruction but I would like to emphasize again that if it is used unwisely, the mortality rate may actually be increased. For ordinary purposes a tube decompressing the stomach is adequate but many surgeons like to use the Miller-Abbott tube which can be passed through the duodenum and descends into the small intestine down to the point of obstruction. This in reality results in more adequate decompression but for practical purposes, I have obtained about as effective results with gastric decompression. There are certain cases when the Miller-Abbott tube is distinctly superior to gastric decompression with the ordinary nasal tube. A good example of this would be decompression of the terminal ileum or colon preparatory to and following resection of that portion of the bowel, when a primary anastomosis is done. Postoperative decompression just proximal to the anastomosis is actually more important than decompression at this point before operation.

The limitations of decompression and the length of time which it should be utilized must be thoroughly understood. There is, of course, no question about the fact that when gangrene has developed, intestinal decompression is entirely subsidiary to operation. However, decompression in such cases for an hour or two while the patient is being prepared for operation, is very helpful since it will evacuate the stomach, aid in the anesthetic, and relieve distention as encountered on the operating table. In other words, decompression will be helpful in every case of intestinal obstruction but in many instances indeed it is not the primary form of therapy. In reality there is only one type of obstruction which may be consistently and completely relieved by decompression alone. This type of obstruction is that produced in the small intestine by adhesions. Decompression of obstruction in the large bowel is not practical, being prevented by the ileocecal valve. Although an obstruction of the small intestine produced by adhesions may be completely relieved by decompression, it should be remembered that the obstruction will usually recur at some future date. Therefore, it is wise to perform a laparotomy for relief of the obstruction, within a few days after the obstruction has been relieved and caloric intake has been resumed. The advantage of such a plan is considerable since operation can now be performed in such cases with a negligible operative mortality.

Obviously, a patient with strangulated hernia, volvulus, intussusception, etc., is subjected to decompression as soon as admitted, realizing that it may take one or two hours to correct dehydration and electrolytic imbalance sufficiently to restore operability. Obstruction produced by malignant tumors likewise is very seldom relieved by intestinal decompression although the urgency for operation is not as great as in strangulated hernia, etc. However, in many instances, immediate operation may be indicated if an obstruction produced by carcinoma in the colon is complete. The reason for this urgency may be ascribed to the fact that the colon proximal to the obstruction occasionally perforates because the ileocecal valve may completely obstruct gas from regurgitating backward into the small intestine.

During the process of decompression, correction of dehydration and loss of electrolytes is commonly achieved by the administration of 5 per cent glucose solution containing buffer solution.

It should be emphasized that the tube tends to become obstructed particularly during the first hour or two after insertion into the stomach, largely because of the presence of food particles. It is necessary, therefore, to watch the tube at frequent intervals and to resort to irrigation and suction with a syringe to keep it open and obtain adequate decompression. The larger size nasal tube should be used for this purpose. The amount of fluid obtained must be measured and accurate data kept regarding these figures.

It should also be emphasized that during decompression, the patient must be observed closely lest gangrene develop during the conservative treatment. With few exceptions when strangulation develops, certain danger signals (as described later) will show up even in the incipient stage of gangrene.

Results Desired and Obtained by Effective Decompression: To consider decompression successful and safe, certain effects must be obtained. (1) The rate of fluid return should be constant and copious in amount. If the patient is

markedly distended and only 200 or 300 cc. are obtained in the first few hours of treatment, the decompression cannot be considered to be very effective. Without effective decompression toxic effects incident to the distention will be maintained and actually be increased. (2) Distention should decrease appreciably within a few hours. The importance of relief of distention has already been discussed. In general failure to obtain relief of distention (if it is certain that the tube has been kept open) is usually due to the fact that the obstruction is distal to the ileocecal valve. It is admitted that on many occasions the Miller-Abbott tube may be more effective than gastric decompression. (3) There should be a distinct relief of pain complained of by the patient. To a certain extent the pain is related to the degree of distention but it must be remembered that strangulation and other complications produce pain and are in reality more important than distention. (4) There should be a decrease in the amount of abdominal tenderness. (5) Amelioration of manifestations such as discussed should result in an improvement in the patient's appearance and subjective complaints. In other words, he should tell you that he feels much better if the decompression has been of value. (6) Effective decompression of obstruction of the intestines due to adhesions will result in a decrease in edema at the point of obstruction. Presumably it is this decrease of edema which is a major factor in relieving the obstruction. (7) Shortly after the obstruction is relieved or has become partial, passage of gas will be noted by the patient. This will be a fairly good indication of relief of obstruction, particularly if there has been an interval of many hours after onset of symptoms when no gas was expelled. (8) A spontaneous bowel movement or an effectual enema will be more conclusive evidence that the obstruction has been relieved. We must keep in mind, however, that a bowel movement or effectual enema may be obtained in the presence of complete obstruction simply because the bowel distal to the obstruction has been evacuated.

If the changes indicated above are not obtained within several hours, immediate operation may be advisable. If this delay is not carried too far, no damage will be sustained by the patient since correction of dehydration and electrolytic imbalance over a period of a few hours will improve the patient's physical condition, except in those instances when strangulation is developing. In these cases, delay of more than an hour or two is not desirable.

Danger Signals Which May Develop During Decompression and be Indications for Immediate Operation: There are certain manifestations which when developing during decompression may be considered as indications for immediate operation. In general, the chief pathologic process feared is development of gangrene in a loop of intestine with absorption of toxic material from the gangrenous portion and possible perforation later. (1) Persistence of increase of pain usually indicates that some pathologic process, such as strangulation, is present or developing. Persistence of pain might be expected if decompression were ineffective. However, in the presence of gangrene, pain would not be relieved even though distention were relieved. It is probable that in the presence of strangulation of the intestine, relief of distention could not be achieved, although we do not delay operation in such cases long enough to know whether or not decompression would relieve distention, other than that involving the stomach. (2) Increase in abdominal tenderness is significant and usually indicative of development of some undesirable pathologic change, such as strangulation. (3) The development of muscle spasm of some portion of the abdomen is quite indicative of the presence of a lesion which is involving the peritoneum and should have operative correction. Naturally strangulation or perforation of the intestines (particularly the latter) would be conditions suspected when muscle spasm develops. (4) Failure to obtain relief of distention has already been discussed and may be caused by strangulation but perhaps more commonly occurs when obstruction is distal to the ileocecal valve. In itself, it is not an indication for immediate operation, although it is usually a signal that operative treatment must be undertaken soon. (5) An increase in pulse rate is extremely valuable as an indication of serious pathologic change, such as strangulation. One must, of course, eliminate changes in pulse rate incident to activity, apprehension, etc. (6) The development of a mass is usually a fairly safe indication that operation is indicated since it usually indicates the presence of a strangulated loop or one which is becoming increasingly distended and thereby is not being decompressed. (7) Leukocytosis may develop in the presence of strangula-

tion alone and is by no means indicative of the presence of peritonitis. However, leukocytosis is seldom present in a simple obstruction due to adhesions. It therefore becomes useful as an indication for operation. (8) Fever is a strong indication that strangulation has progressed to a pronounced degree or that peritonitis, due perhaps to perforation, has already developed. Obviously, other sources of fever such as respiratory infections, etc., must be eliminated before one is allowed to arrive at the conclusion just expressed. Ordinarily, if fever is due to strangulation or perforation, local manifestations, including pain, tenderness, muscle spasm, etc., will likewise be present. In other words, if abdominal findings are negative, fever is apt to be explained on the basis of other causes although local lesions such as lymphadenitis might be present.

It should be emphasized that the presence of no more than one or two of the above manifestations may be sufficient to demand immediate operation. Of the entire group, increase or persistence of pain, and development of tachycardia are perhaps the most valuable signs. Muscle spasm might be more accurate, but this is too apt to be a late manifestation and therefore not as valuable in holding down the mortality rate.

Operative Consideration: There is a difference of opinion as to the most desirable anesthetic in operations for intestinal obstruction. However, the author does not favor spinal anesthesia since it tends to have a depressing effect upon the blood pressure, and reactions following intestinal obstruction are apt to be of this same type. Obviously, local anesthesia is desirable wherever it can be used, such as in strangulated hernias. Intercostal block is not shocking. Gas ether is probably as good an anesthetic as any although a general anesthetic is not without its danger. Intravenous sodium pentothal is perhaps as satisfactory as any, but requires experience to make it safe under such circumstances.

The operator should avoid trauma, particularly to the intestines. Rough handling of the intestine results in an extravasation of a great deal of fluid (plasma into the wall of the intestine). Proof of this loss of fluid is readily discernible when we realize that in the animal laboratory, squeezing the intestine is perhaps the most effective method of producing shock, except that induced by hemorrhage. Exploration must therefore be done with care, and manipulation held to a minimum.

Obviously, resection of the intestine should be avoided, if possible. On the other hand when resection is necessary, it is usually wise to do a wide excision, particularly since the edematous intestine next to the gangrenous area may not only heal poorly but allow absorption of intestinal contents through the damaged mucosa. There is fairly good evidence that toxic material from the lumen of the intestine may be absorbed through damaged mucosa even though it is not the site of gangrene.

As intimated the amount of operative work should be minimized wherever possible. Therefore it would appear that an old principle in surgery, namely, the Mikulicz type of resection of bowel, should be utilized wherever possible. This shortens the procedure and minimizes the trauma. The gangrenous area can be resected leaving a clamp on the proximal and distal stumps of the intestine outside the abdomen. A catheter can be placed in the proximal loop for immediate drainage, or the clamp removed from the distal loop a day or two later as desired. A couple of weeks later, the spur is crushed and the enterostomy closed so that intestinal continuity is re-established.

Performance of an ileostomy as advised and used many years ago is now considered inadvisable except in rare instances. After all, the chief function of ileostomy is intestinal decompression which can be achieved more readily and with much less danger by a nasal tube. About the only indication for ileostomy is its performance in a dilated obstructive loop when the patient is too ill to justify exploration for correction of a mechanical obstruction. Under such circumstances, an enterostomy may be a life-saving procedure and after the patient has recovered from the obstruction, an operation can be performed to correct the obstruction. It must be remembered, however, that if an ileostomy is performed in the jejunum or high in the ileum, there will be adequate absorption of fluid, electrolytes, food, etc.; these factors will increase the possibility of a lethal outcome unless corrective therapy is maintained at all times.

Postoperative Care: The postoperative care in intestinal obstruction is extremely important and will be a major factor in determination of the mortality rate. One of the most important features in postoperative care is maintenance of intestinal decompression. If an anastomosis has

been performed, utilization of a Miller-Abbott tube with the tip of the tube just proximal to the anastomosis is highly desirable. However, it is true that in the average case, gastric decompression is adequate. Naturally, the amount of fluid and electrolytes must be watched closely to prevent dehydration and electrolytic imbalance.

The average adult individual requires 3000 cc. of fluid plus that amount lost by abnormal mechanism, such as vomiting and gastric decompression. Five per cent glucose intravenously represents a very satisfactory media to supply this fluid; in addition to fluid, the patient receives calories. Sodium chloride in the form of buffer solution may be included in the 5 per cent glucose and given in amounts equal to that required. The formula recommended by Coller is very satisfactory in the average case. He suggests that one-half gram of sodium chloride be given per kilo of body weight for each 100 points the blood chloride is below normal. This rule cannot be used literally in extremely sick patients lest too much salt be given. In extremely ill patients there is a tendency for salt to be retained largely because of impaired function of the kidney and other secretory mechanisms. An overdose of salt therefore becomes a definite possibility and must be avoided since it is just about as undesirable, and damaging to the patient as hypochloremia. If the overdose of salt is very significant, generalized edema will develop, appearing first in the dependent portions of the body.

Transfusions are given as indicated. A low red count would naturally indicate the need of whole blood. Low blood proteins are indicative of the need for administration of plasma if the red count is satisfactory. If the proteins are much lower than normal, administration of blood or plasma will be too expensive to replenish blood proteins. Under such circumstances, the administration of amino acids, as popularized by Elman, may be utilized as a substitute for plasma in the regeneration of protein.

Take interest, I implore you, in those sacred dwellings which one designates by the expressive term laboratories. Demand that they be multiplied, that they be adorned, these are the temples of well being and happiness. There it is that humanity grows greater, stronger and better. Science is the soul of prosperity of nations and the living source of all progress. Pasteur.

AMEBIASIS, OTHER INTESTINAL PROTOZOAL INFECTIONS, HELMINTHOUS DYSENTERY

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A number of years ago a small number of physicians on the West Coast were trying to get the ear of the American medical profession, owing to the fact that there was in this country a great deal of amebiasis. They were suggesting that we pay more attention to it than we had in the past. It was not, however, until 1933 that the problem of amebiasis was really brought to our attention forcefully, and that was the result of the outbreak that occurred during the World's Fair in Chicago. At that time there were some 800 cases, with about 40 deaths, that were traced to Chicago hotels and subsequently to infected servants and guests who had contaminated the water. The sewage pipes and the water pipes were mixed up; some plumbers had not done a very satisfactory piece of work and the water supply was contaminated. That epidemic helped us in a number of ways because it showed us very definitely what the incubation period of amebiasis was. Some of those cases, after their infection, developed their symptoms in about seven days and from then on up to about eighty days, so the incubation period was suggested to be somewhere between one week and eighty days.

Amebiasis is a widespread disease. It occurs all over the world. There is no particular area where it is peculiarly endemic. There is no particular seasonal incidence to it, although it is usually worse during the fly season. It is spread through water, fresh vegetables, and things of that kind, and it tends to occur throughout the year more than does bacillary dysentery.

In areas where it has been studied very carefully it is found to be relatively more common in males than in females. For instance, in some studies in India of cases that were recorded in a rather large group, about 90.6 per cent were in males, while 9.4 per cent were in females. In the individuals coming to the clinics where there were amebic complications such as liver abscesses, about 93.8 per cent of all the liver abscesses were in males and about 6.2 per cent in females.

The ameba was discovered a long time

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ago, way back in 1876. Since its discovery we have found there are several types of intestinal amebae in the human, and only one of them is of any major importance from the standpoint of being a pathogenic ameba.

The transmission of amebiasis is from man to man through flies, water, vegetables, and human carriers. The amebic cyst is the troublemaker in transmitting the disease because it survives for some time, the vegetative forms not surviving exposure so readily.

There are different types of intestinal amebae, Endameba coli, Endameba histolytica; the Iodameba; Endolimax and Dientameba.

In a series of twenty-five surveys of Endameba histolytica 57,561 persons were examined and it was found that from 0.2 per cent to 53 per cent were infected and that 10.2 per cent was the average. We call this to your attention to show you that amebiasis is definitely a problem with us and that we have to pay a good deal of attention to it.

When the amebae are ingested and get into the large intestine they proceed to start trouble. The life cycle is from man to man, the Endameba getting into the intestinal follicles, and once they get into the intestinal follicles the vegetative forms of amebae begin to undergo division. There is a cytolysin that seems to be formed by the amebae as they get into the follicles through the mucosa and begin to multiply. As this cytolysin is formed there is a little area of abscess created and after a time this area reaches the stage where it can obtain the multiplying amebae and the cytolysins no longer. Then there is a rupture of the area and the contents escape. In this little area of abscess in the intestinal wall there are cyst forms developed as well as the vegetative forms. It is these cyst forms which when passed into the stools can resist a certain amount of drying, survive for a period of time in moist stools and be carried by flies to fruits and vegetables or other foods, and the infection is passed on.

There are areas where amebiasis is endemic. There are tremendous numbers of carriers in these regions. These individuals can be almost symptomless. This carrier problem is such a serious one that in areas where amebiasis is actually endemic and known to exist it is a wise thing to examine carefully the stools of all patients that are hospitalized.

We had so much amebiasis in the regions of Syria, Palestine and Iraq that we had a standing rule that every patient who entered the hospital had to have at least three stool examinations. Individuals who have worked with the amebiasis problem feel that sometimes when you are suspicious of amebiasis but cannot run it down you should keep on examining at least six or seven stools before giving up. One of the reasons that it is necessary to examine stools repeatedly is that the amebae are present in clumps, they seem to like each other's society and tend to group together. You will find many amebae in one stool, and the next stool examined may be amebae-free. It has a good deal to do with the discharge of amebae from these little areas in the intestinal wall where they develop. As I said, amebae carriers can be absolutely symptom-free so that unless one is on the lookout for amebae one may miss the most important factor in the transmission of the disease because these relatively symptomless amebae carriers can deposit large numbers of cysts which result in infection of a great many individuals.

In studies that have been made in the East we find that of the British soldiers who go out to Egypt, and who have stayed there for as long as a year and have had an infection of amebiasis about six and a half per cent become cyst passers. In a large group of several thousand troops studied about four and a half per cent of the soldiers who had no symptoms of dysentery at all became cyst passers after a year in Egypt. We believe on the basis of the studies at the Egyptian Medical School (Qasr-el-Aini) about 13.5 of all the people in Egypt are definitely cyst passers and carriers.

Studies made in Holland indicate that between 10 and 12 per cent of the people in Holland carry Endameba histolytica.

The earliest lesion in the intestine is a small yellow elevation in the mucosa. This grows in size and then later breaks down.

What are the symptoms of amebiasis? They are so variable that I cannot begin to describe them in detail. The patient may simply have some gastrointestinal malaise; he may have no real acute pains at all. Usually the onset is very insidious, although in some of the acute cases the patient may pass stools very frequently and

have a considerable amount of pain and actually be bedfast. Most of them have some tenderness over the cecum, some tenderness over the transverse colon, and in the sigmoid area. They do not strain like patients with bacillary dysentery. That is another differential factor that I should like to emphasize. The tenesmus in bacillary dysentery is terrific. Unless your amebic ulcers actually involve the rectum the patient with amebiasis does not strain, does not complain of tenesmus, as does the bacillary dysentery patient.

The stool masses are almost invariably larger than they are in bacillary dysentery, and they vary in number from two to three up to ten, twelve, maybe fifteen a day, usually no more. You do not find a profuse "running off" as you do in the bacillary type. Unless you have a complication you usually have little or no fever. There is none of the severe toxicity that is present in the bacillary type. Very acute cases are rare; you do not see them often. One does not see the rapid emaciation that is seen in bacillary dysentery. Anorexia is present. Another thing which is seen very commonly during the course of amebiasis is a definite tenderness over the liver. Hepatitis is a very common thing in amebiasis. Leukocytosis is also exceedingly variable; you may have 10,000, 12,000 leukocytes, but rarely more unless there is a complication.

One thing that I should like to emphasize and that I think cannot be stressed too much is that intestinal amebiasis may be accompanied by no looseness whatsoever. Intestinal amebiasis may be accompanied by constipation. As you have more and more experience with it you become convinced that one of the things you have to inquire about in cases of chronic constipation is whether in the history sometime previously you can find periods of looseness alternating with periods of constipation. That is a very common sequence in cases of amebiasis. It is not an uncommon situation at all to run across cases that are chronically constipated, like the case of the school teacher I saw three or four years ago who had a case of chronic constipation that caused her a great deal of difficulty. When I went into her history it was revealed that the summer previous to the onset of her constipation she had been the leader in a Girl Scout camp. She had developed diarrhea, after that experience at camp, then subsequently had gone through periods of looseness and constipation. Her stool was full of Endameba histolytica.

These patients not infrequently, because of the variable pains and aches in the abdomen, because of their uncomfortable bellies, their growling bellies, develop mild neuroses that will clear up very quickly on adequate treatment.

The amebiasis may subside, the condition may clear up, like a case of syphilis, without any treatment at all, but you never know which one it is going to be that is going to do so, consequently, when we find them we have to do something for them.

Another thing that is exceedingly common in amebiasis is the great tendency to relapse. You think your patient is cleared up and then a few weeks or a few months later he comes back again with the same problem. This necessitates that we follow through when we undertake treatment for amebiasis, and be sure we have cleared the patient's intestines of the organisms.

I want to mention two or three of the complications and then take up the whole problem of treatment. The most common complication of amebic hepatitis is liver abscess, following hepatitis. You may have amebiasis with complications in various structures; you may have amebiasis in the skin, which is a very mean problem and formerly was not diagnosed but was one of the types of skin lesions which will not heal with ordinary treatment. When we found that amebiasis could cause these skin ulcers and learned that there were definitely amebae present in them, they cleared up like magic when we began treating them with emetine, as we would treat an ordinary case of amebiasis.

As far as the problem of liver abscess is concerned, it appears most frequently in the right lobe and in the upper posterior part of the right lobe. The symptoms that the patient brings in are exceedingly variable. He usually complains of pain over the liver area. He may be toxic; he may have considerable fever, and there may be some enlargement of the liver below the costal margin. There is almost always, in those patients, a leukocytosis. The fever is exceedingly variable, depending upon the size of the abscess and the degree of secondary infection that may exist in some of the cases.

I might tell you a little story of one of the problems of amebic abscess of the

liver that I ran into some years ago. In the spring of 1936 I was planning to return to the States and one of my friends at Galveston asked me to purchase a certain type of Oriental rug for him. We couldn't get them in Beirut because Beirut was a French mandate and in a French mandate you find the flowery Persian pattern because the French liked the flowery Persian patterns. If you wanted a good Daghestan or Caucasian rug with geometric patterns it was necessary to go to Palestine where there was a British mandate. During the spring vacation I went to Jerusalem and found the rugs that my friend desired and picked up a few for myself. I asked the man who sold me the rugs, "What is the duty on rugs between Palestine and Syria?" The rug merchant said he couldn't tell me exactly but I had better leave them with him and he would send them up by ship to his store in Beirut and I would have to pay a minimum duty. I said, "All right, you send up three by boat and I will take three in the car with me." So we left Jerusalem and went up the back way over through Nazareth, over the Jordon headwaters, through Damascus and over to Beirut.

I had my three children in the back of the car and the rugs piled in the bottom. The children were sitting there with their feet on the rugs. I got to the customs office at the border of Syria and Palestine. A number of cars were waiting and I went in to get through the customs. I took my passport and in a few minutes the gendarme who was the customs official arose from his desk waiving my passport and grinning from ear to ear. He said, "Dr. Turner, how are you?" "Don't you remember me?" I knew his face but I didn't remember his name. He said, "Don't you remember me in the hospital two years ago with amebic dysentery?"

"Don't you remember my sister, Latiffe?" I remembered Latiffe and I will remember Latiffe as long as I live. Latiffe came to me rather toxic, running a fever and leukocytosis. On physical examination, in the right axillary area I found a fluctuating mass. She came from an area where there was a good deal of amebiasis, and that was what was suspected. After doing fluoroscopy and checking on her I aspirated this fluctuating mass and got some pus from it containing amebae. I couldn't find anything in the lungs and I wondered how, under the sun, this mass got up here, so I took her over to the x-ray department and we went to work on it. We finally decided, in order to find out where that material came from, to inject some contrast media into the cavity. We found the abscess had a tract which ran down over the lateral wall of the thorax between the skin and the ribs to the costal margin, around the costal margin, up on the other side of the ribs and back for about two and a half inches, and then shot directly over into the liver. Well, Latiffe improved on emetine and yatren. She had no recurrence and got along very nicely, but that is the longest fistulous tract from amebic abscess I ever saw.

When amebiasis has been diagnosed, the problem of treatment is very important. The treatment par excellence is emetine. There is no getting away from that, and I certainly am not in agreement with the S. G. O. circular letter at the present time regarding the amount of emetine that should be used. We routinely used for our amebic cases one grain of emetine hydrochloride daily for ten days. Along with it we give either chiniofon (which is yatren, an oxyquinoline derivative) or carbarsone. I am sure you are all familiar with carbarsone. We give by mouth 0.5 gram of chiniofon twice a day during this ten-day period that we give emetine hydrochloride by injection. Along with it we give a chiniofon retention enema. We take two to four grams of chiniofon, make a two per cent solution, and after a cleansing enema give it as a retention enema at night. Those cases clear up remarkably well and there are very, very few relapses. If you use carbarsone, use it along with emetine hydrochloride. Carbarsone 0.25 gram three times a day for seven days is the usual dosage. Then make up a one per cent solution of carbarsone with two per cent of sodium bicarbonate as a retention enema to be given following a cleansing enema, and your cases will clear up with very, very few recurrences. The retention enema should be given every night during the course of the treatment.

While I was in the Near East I watched a very interesting development by some of the members of the French School. They decided that they had a unique and certain one-dose method of clearing up amebiasis. They proceeded to give 90 milligrams of emetine hydrochloride intravenously as a single dose cure of amebiasis. Pretty soon I had cases coming to the hospital who had been treated by this rather vigorous French method by some

of the local physicians and some of my French colleagues. Myocardial weakening, with myocardial failure was a common observation following this treatment and those patients would be in bed a month, six weeks, two months, sometimes longer, getting over the effects of emetine intravenously. That is the worst thing that has ever been done for amebiasis. Emetine should never be given intravenously under any circumstances.

Some people prefer to give their emetine in half-grain doses twice a day. I do not believe that is necessary. I think it might be a good idea to give a half grain as the first dose, but after that I think it is wise to give the emetine in doses of a grain once a day. After all, emetine hydrochloride hurts when you inject it and if you inject a half grain twice a day you have got just twice as many sore places on your patient and it is not necessary to do it that way.

A number of other things have been developed for the treatment of amebiasis, but at the present time the treatment should include emetine hydrochloride. I advise emetine hydrochloride one grain for ten days running, rather than for three or four days.

Can you treat an amebic dysentery with just carbarsone or yatren? Yes, you can, but you never know which one of your amebic patients already has some amebae in the liver, and the yatren, or carbarsone, does not get the organisms when they are in the liver. If you want to be certain to cure an amebiasis you give emetine hydrochloride. I think that every case of actually diagnosed Endameba histolytica should receive emetine hydrochloride plus either carbarsone or chiniofon. The combined treatment gives the best results with far fewer relapses if you combine the emetine with either chiniofon or carbarsone.

I should like to point out too, that as complications Endameba very frequently cause marked infiltrations of the bowel. If one does a proctoscopic examination on these amebic patients the amebic ulcers are very typical when found in the lower sigmoid. The proctoscopic examination does not hurt the patient as it does in the bacillary form of dysentery.

I think I have covered the most important features of amebiasis. I am going to move on to some of these other cases. I could spend an hour or two hours on amebiasis alone, but I do want to mention just briefly some of these other diseases that are receiving more and more attention.

Balantidium coli is an organism that normally lives in the intestine of the hog. I was pleased to see, as I came in today, a very nice demonstration in the scientific exhibit of the disease carried by animals transmitted to man. Balantidium coli is a ciliated infusorium. Some of you may have read the history of the microscopists and you may remember that Anthony Leeuwenhoek, the old Dutchman, described something that was taken from his own stool when he had a dysentery. It was a ciliated organism that was probably a Paramecium and probably was Balantidium coli. It is present in the United States in a number of areas, in Texas and North and South Carolina; it is present in Central and South America, in the Philippines, India, China, North Africa where our boys are now, through Egypt and the Sudan and in Northern and Southern Europe.

It is also found in the chimpanzee, the orangoutang, in the Philippine wild pig and in some of the rats, so there are a number of animal disseminators.

As far as the cases described in the United States are concerned, the large majority of them have been traced to butchers and farmers. It has been traced to people who handle hog intestines; to eating improperly cooked sausage or raw sausage.

I want to mention a word or two about symptomatology. It is a mild dysentery, there is blood, there may be mucus. It reminds you more of amebiasis than of any other condition. There may be anywhere from eight to ten or fifteen stools a day, with colicky pains in the abdomen and distended abdomen. The stools are porridge-like and fluid in consistency, contain red blood corpuscles, a good deal of mucus and some leukocytes. If the condition is not treated the patients gradually become emaciated, cachectic and anemic.

Sometime ago a study was made of 111 cases, and in that group there was 29 per cent mortality of the severe cases, and in a group of milder cases almost a 7 per cent mortality.

The prophylaxis, of course, is cleanliness, being sure the sausage is properly cooked and taking care of the hands when dealing with hog viscera, and so on.

The treatment up until recently has been very unsatisfactory. Only recently the United States Public Health Service

made some reports on the value of carbarsone in this treatment. It has been found that the use of a quarter of a gram of carbarsone two or three times a day from seven to ten days will clear up most of the cases of balantidial infection.

In passing, I should like to make a comment on malarial dysentery. I am sure that all of you are familiar with the fact that every once in a while in a bad case of malaria we observe a case with cerebral manifestations. Those cases not infrequently die. If we examine them we find that the vessels are plugged with thrombi consisting of cells and malarial parasites. Those cases, unless they are treated very energetically, have a high percentage of fatality. Exactly the same thing happens in the wall of the intestines. Some of these very severe malarias will have intestinal vessels plugged with cells and with malaria parasites, and those areas will become necrosed because of lack of proper blood supply. They will break down, and the individual will develop during the malarial episode an actual malarial dysentery. That condition will clear up if you control the malaria. I simply mention that in passing because it is one of the things we must keep in mind in handling these diseases that we are seeing so much more of nowadays in various parts of the world.

Another condition that I wanted to bring to your attention because it is very common in regions where our soldiers are now located is Leishmanial dysentery. There are three forms of Leishmania. There are two principal manifestations, one being a visceral manifestation, the other being cutaneous manifestations. In the Near East and around through the Mediterranean we find Leishmania tropica, through Egypt and the Sudan, through Syria, Palestine, Persia, Iraq, on up into Russia. We find it also in Greece and Turkey and Italy. We find the donovani form all through these areas and in India and in China. We find the braziliensis form in South America.

The visceral form is associated with a very serious dysentery in about 25 per cent of the cases; that is, a quarter of these visceral Leishmanial cases will come down with dysentery. Up until a few years ago visceral leishmaniasis was associated with intermittent fever, anemia, cachexia, and about 90 per cent death. At the present time Dumdum fever or kala-azar can start with the same symptoms, intermittent fever, gradual cachexia, enlarged spleen, and so on, but if you know how to treat it the death rate is changed to about 10 per cent. The recovery rate now can be 90 per cent instead of a 90 per cent death rate.

When you diagnose this condition and are sure of it you can use the antimony preparations. When they are used properly, in sufficient amounts, the visceral forms of leishmaniasis will clear up. I have seen these visceral forms of leishmaniasis not infrequently, especially in children in the Near East, and they have very high mortality unless they are treated energetically.

There is no use going into the treatment because we do not see that here yet. We will. We want to be cognizant of the fact that antimony preparations can clear it up.

The disease is transmitted from man by insect host to another man and then undergoes its life cycle in man. Just which insects transmit the disease is still not absolutely determined. The sand fly, certain other insects and some people feel that the ordinary bedbug will transmit it.

Another group of dysenteries are those associated with helminthous infections and the Schistosomal organisms are the most important of these. In the East we have three main varieties: Schistosoma hematobium, Schistosoma mansoni, and Schistosoma japonicum, the latter being localized in the Far East, the mansoni being through the Middle East and in South America, and the hematobium being in the middle East and parts of Africa. We saw in the Mediterranean, Syria and Palestine both hematobium and mansoni.

The life history of this organism is very interesting. As I told you earlier, I saw two cases two weeks ago in one of the Army hospitals in Tennessee coming back to us, and we should keep this disease in mind when examining men returning from service in the Orient.

The human being gets infected with the Schistosoma organism, and then in the stools or urine, depending upon whether it is hematobium, mansoni or japonicum, the eggs are found. These eggs are absolutely characteristic when you see them under the microscope and you cannot help diagnosing them. The eggs get into the water; the water is absorbed because of the difference in osmotic pressure, the egg bursts, and the little ciliated miracidium gets into the water and this little

ciliated miracidum enters the body of the snail. There are certain types of snails which can harbor the miracidium. It undergoes development in the body of the snail. After a while a little cercaria escapes. This looks something like a tadpole with a split tail. Then somebody goes in wading or swimming and after he gets out from his swim he begins to scratch down on his legs or up on his thighs or some place like that. That is one way this organism can get into the body by penetration of the skin. It has been shown repeatedly that it can penetrate the skin and get in through the skin to the circulation.

Another way infection can be obtained is by ingestion of the cercariae in water contaminated by infected carriers or from vegetables that have been washed in infected water. Then the cercaria will penetrate the stomach or intestinal wall and get into the circulation. The female is the long organism that looks a little like an angleworm. The male is the broader organism with lateral flaps. The female is carried in the gynecophorus canal made by the flaps of the male. These parasites lodge in the liver and in the vessels of the bladder and rectum. Hematobium for some reason likes the bladder, mansoni and japonicum like the rectum.

The eggs are characteristically shaped with a terminal spine. The mansoni have a lateral spine; the japonicum, true to form are smaller, with a smaller lateral spine. These pointed eggs irritate and set up local irritation and gradually break through the tissues and are discharged in either the urine or the stool, depending upon which form is present.

As a result of this infection you get all forms of trouble in the rectum and the bladder. In the rectum you get polyp formation, you get ulcer formation, and as a result of these ulcers and polyps definite dysentery is produced, and it can be a very disabling dysentery. Sometimes it will take five months, six months, seven months after an infection for clinical manifestations to become apparent. That is why I say we are going to see some of this over here, because the incubation period can be so long. It can also be short; it can also be three or four weeks, but it takes ordinarily five or six months for this disease actually to put in a clinical appearance. A man can be discharged from the Army in perfectly good physical condition, pass all the examinations, and later develop this clinical condition. It is something that we all ought to be aware of as a possibility when we see, from now on, cases of bloody urine and mild forms, even severe forms, of dysentery in men who have been abroad on military missions.

Schistosomiasis is very common in Egypt. As a matter of fact, when you go to Egypt and talk to the natives, if you use the term bilharzia every native knows it means bloody water. Bilharz in 1850 was the first to isolate the organism and the common name for it is Bilharzia. All along the Nile River it is very common. There was a heavy focus of it just south of where I was located in Syria. One of the streams had the right kind of snails in it. If we find the right kind of snails in some of our streams and some of the boys bring back the right kind of Schistosoma, that is all it will take to get the thing started.

Fortunately there is a very satisfactory treatment for it. Again, antimony preparations are used. There is a very interesting history connected with the treatment of Bilharzia. We have known for some time that antimony preparations could stop the condition, clear up the dysentery, and get rid of the Schistosoma infection. Incidentally, if you don't get rid of it sooner or later you may get cirrhosis of the liver and other conditions that will take the patient off.

Some years ago, King Fuad, who was the predecessor of the present King Farouk in Egypt, became quite concerned over the high incidence of Bilharzia in Egypt. A German chemical firm was commissioned by Fuad to try to develop a form of antimony that was not as toxic as the sodium potassium antimony tartrate that was being used. It was too dangerous to use the straight sodium potassium antimony tartrate, so Fuad gave out of his royal exchequer a certain sum of money to finance these investigations. The company finally succeeded in preparing a substance that was less toxic and it is now known as Fuadin.

As far as other helminthous dysenteries are concerned there are about two or three others that are not very important which occur in certain parts of the world. One of them is caused by a series of strongyloides. It is seen rather commonly in China. We do not ordinarily see it outside of the Orient. It is one of the things that is picked up by four per cent of pris-

oners that are taken in Africa, so that it is something to keep in mind. We have no satisfactory treatment for it at the present time.

There is a group of dysenteries or diarrheas called Giardial and Trichomonal diarrheas. I mention them simply to repeat that in my opinion Giardia and Trichomonas are not the primary causes of dysenteries, that when you have a dysentery with a heavy Giardia or Trichomonas infection something has been there before, either bacillary dysentery or amebic dysentery or acute enteritis, something that has irritated the bowel and made it possible for Giardia or Trichomonas to become more active. You know that the Giardia and the Trichomonas reside in the upper part of the intestine and they come down as secondary invaders and not as primary ones. They are very difficult to treat. The best results seem to be with the arsenicals, although chiniofon has been found to be of some value.

This business of tropical medicine, as a matter of fact, is something that is coming very close to us all. It is not tropical medicine; it is just plain geographic medicine. If people will quit dividing it into tropical medicine and general medicine and things of that kind and will include these things we call tropical medicine in our everyday teaching, all of us will be better off.

I attended two excellent medical schools, two of the best in the country, and all the information on tropical diseases that I received as a student I could stick in one eye and not even feel it. I had to go abroad to learn tropical medicine and then I came back home and found that we have plenty of these things right here.

One of the first bad cases of amebiasis I saw in the Near East was in an old man about seventy years of age. He came into the hospital thoroughly emaciated, dehydrated, with ribbon stools and a nodular mass down in the sigmoid area. He had the most beautiful carcinoma of the sigmoid I have ever seen clinically. He was in such distress that I called one of my surgical colleagues and said, "We had better do a colostomy on this man or we won't be able to save him." I got an autopsy permit from his family in case he died. My surgical colleagues agreed with me that we ought to do an emergency colostomy. I transferred him to surgery because I was so sure of what it was. I did not wait for the thing that I routinely did with my patients, stool examinations. It was not two hours after I transferred him until I received a call from the laboratory. "Dr. Turner, this is the heaviest infestation of Endameba histolytica we have had in the laboratory for a long time. Come over and look at it." I went over and looked at it and the stool was simply teeming with Endamebae. I went back to my surgical colleague and I said, "Doctor, you had better transfer that patient back to me for a few days. You don't dare operate on that intestine with this amebic infection because infections in the intestine with Endameba histolytica are notoriously difficult to operate upon. When you get an induration of that intestinal wall and try to operate on it you get into trouble very quickly." So my colleague sent the patient back to me and I treated him with emetine and gave him yatren retention enemas. He gradually improved, the obstruction disappeared, and about six weeks later my autopsy walked out of the hospital. He had no operation and he made a complete recovery. I nearly flunked on that one.

I nearly flunked on another one, too. I came home. I moved to Nashville in 1936 and a few weeks after I had been at the hospital one of my Negro colleagues came in one day with a patient that he wanted a consultation on, a woman from Paducah. I went over that patient with him. She had a ring deformity of the sigmoid, a palpable mass, blood in the stools, a fungating, fragile mass on proctoscopic examination, all of the x-ray evidence anyone would desire for a carcinoma of the sigmoid. I was in Nashville, I was not in the Near East; I wasn't thinking about amebiasis. I told the Negro physician, "I think we had better advise this patient to have a colostomy because she is going to have a complete closure there before long." We advised that good lady to have a colostomy, hoping that we might find the situation satisfactory for resection of the sigmoid. She turned around to her physician and to me and said, "If I have got a cancer I'm going to die with my cancer, but I'm not going to be operated on for this thing." I turned to my colleague and said, "Doctor, if I were in Syria you know what I would do with that patient? I learned a number of years ago that I didn't dare make the diagnosis of carcinoma of the sigmoid or of the large intestine anywhere until I had ruled out amebiasis of the large intestine, and if I were in Beirut I would be searching high,

wide and handsome for amebae in that patient's stools."

He said, "All right, we'll send the stools to the laboratory." We sent some stools to the laboratory and to my utter amazement she had Endameba histolytica. We gave her emetine hydrochloride, we gave her carbarsone and carbarsone retention enemas and the good lady comes to Nashville to visit her relatives every once in a while and comes over to the hospital to thank us for the operation that we didn't do.

That was in Nashville. I was home in civilization where I wasn't expecting to run into these things. I believe very sincerely that it is very important for you and me here in Kentucky and Tennessee to examine the stools carefully of every patient we suspect of malignancy of the lower bowel and rule out amebiasis before we go ahead and operate for malignancy unless we have a biopsy that is absolutely positive.

PNEUMONIA, MALARIA, APPENDICITIS IN ONE CASE

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A resume of the case of L. N. H., male, white, 20, a patient on the Medical and then on the Surgical Service of this Station Hospital is interesting because of the unusual incidence of three acute clinical conditions and the diagnostic problems created thereby.

The patient was referred to the Dispensary of this Hospital with the diagnosis of Fever of unknown origin by his unit Medical Officer. He was admitted to the Medical Service, critically ill, with temperature 103°, pulse 120, and respiration 22. Complaint on admission: Sore throat, chill, pain in chest, nausea and vomiting.

Upon admission the patient stated that he had had a cold for a week, gradually increasing in severity. His throat was sore and there was a pronounced cough with pain in the chest and chilliness. During the night of September 30 he was nauseated and vomited once or twice and had moderate abdominal cramping.

Examination on the ward revealed: Temperature 103°, pulse 120, respiration 22: mild injection of the nasopharynx, mild cyanosis, conjunctivitis, and some abdominal distention with moderate right lower quadrant tenderness. Breathing was broncho-vesicular in the right lower chest posteriorly, with moist rales. The initial impression of lobar pneumonia, right lower lobe was recorded. A complete blood count was ordered and urinalysis.

The laboratory made an emergency report of Plasmodium falciparum parasites in the blood smear; white blood cells 7,800 and urinalysis, negative. The patient was immediately given quinine which was kept down with difficulty. Since the patient's condition was serious quinine mixed with diluted Hydrochloric Acid was given and was retained fairly well.

On October 3rd the temperature was higher; saline and glucose were given intravenously. At this time the white blood cells totaled 7950 and no malarial parasites were found.

On October 4th the patient was re-examined and the diagnosis of lobar pneumonia was confirmed. A second member of the Medical Staff examined the patient and concurred in the diagnosis. At this time the total leucocytes were 6400 and the blood smear was for malaria.

At 1:00 A. M. on the 5th of October the Surgical Officer of the Day was called to see the patient who was complaining of generalized cramping, abdominal pain, and a more intense sharper pain in the right lower quadrant which had come on suddenly. A mass was found in the right lower quadrant and appendiceal abscess was diagnosed. It was felt that in as much as a mass was already present emergency operation was not indicated. Accordingly the patient was seen again the next day by the Surgical Staff and the diagnosis confirmed. The presence of the pneumonia and the improved condition of the patient encouraged a further period of waiting, it being hoped that the infectious process would continue to be localized and the chest condition to improve.

The patient did get better rapidly, the abdominal mass decreasing in size, the temperature dropped to normal, and the patient's cough disappeared and he was allowed out of bed. Sulfathiazole, which had been given for the pneumonia, was discontinued.

October 21: There was a recurrence of the right lower quadrant pain, without nausea or vomiting but accompanied by a mild rise in temperature. The Surgical Staff again saw the patient and urged his confinement strictly to bed, liquids, and treatment for an acute upper respiratory infection which had arisen. The mass in right lower quadrant had increased, was again tender, and by rectal examination

Approved by Councilor

was tender but not fluctuant. Operation was deferred because of the cold. White blood cells at this time were 7,600 and urine and blood negative.

October 23:—The patient was transferred to the Surgical Service where he was kept in bed.

October 28:—Appendectomy was done through a classical McBurney incision. The appendix was found to be retrocaecal, acutely inflamed, ruptured at a point approximately two-thirds the distance from the base to the tip. It was lying in a bed of about 2 c. c. inspissated pus. The appendix was removed (in two pieces) and 6 gms. sulfanilamide powder were sifted into the abscess cavity. The abdomen was closed in layers.

After a rather stormy postoperative course the patient recovered completely and is now on his way back to full duty. There has been no recurrence of the malaria nor of the pneumonia.

A table of the blood examinations is appended.

LABORATORY DATA

BLOOD COUNTS					MALARIA
1943	W.B.C.	R.B.C	Polys	Lymph	
1 Oct.	7800	5.19m	81	18	P. falciparum
2 Oct.	7950	-	50	44	Negative
4 Oct.	6400	3.92	53	44	Negative
8 Oct.	6650	-	54	44	Negative
16 Oct.	5850	-	63	36	Negative
17 Oct.	5850	-	68	32	Negative
21 Oct.	7600	4.60	44	56	Negative
27 Oct.	7650	4.60	56	44	Negative
28 Oct.	Operation				
1 Nov.	12750	4.71	68	32	Negative

At no time were the urinary findings abnormal

Dr. Szent-Gyorgi of Szeged, Hungary, discovered that vitamin C, in which the citrus fruits are especially rich, has no effect on scurvy unless it is accompanied by an unknown factor which he called vitamin P. This "P" reduces the fragility of the capillaries. Unless it is present the capillary walls burst and bleeding follows.

Recent work done in Scotland by Dr. Scarborough, Dr. Zaecho of Denmark and the Glaxo Laboratories of London have confirmed Szent-Gyorgi's original findings.

The Royal Infirmary of Edinburgh has shown that the citrus fruits do contain something which strengthens the capillary walls. The Glaxo Laboratories have shown how vitamin P activity can be assessed. But what is vitamin P? There is no answer because it has not yet been isolated.

THROMBOSIS

A. J. Schwertman
Covington

The problem of thrombosis has attracted far too little attention from physicians in proportion to its prominence. We are daily confronted with this phenomena, and when one large surgical clinic (Mayo) reports 6 per cent of deaths by pulmonary embolism occurring after surgical procedures, any procedure that could reduce the mortality rates challenges the medical profession.

The complex process of thrombosis is not completely understood, but certain factors can be outlined. Three etiological factors usually are present:

1. Decrease in the venous flow with resultant stasis.

2. Trauma or other types of change in the wall of the vessel.

3. Some abnormality in the blood itself. Thrombokinase is a lipo protein found in all tissues, lungs, platelets and brain being the richest. It is released by trauma. In combination with calcium it reacts with pro-thrombrin to form thrombin.

Thrombosis may occur in an artery or vein and may produce an unlimited variety of secondary effects. A thrombus one fourth inch which forms in cerebral or coronary artery may produce paralysis, chronic invalidism or death, whereas in contrast we see thrombi many inches long in the veins of the legs producing only edema and discomfort.

Thrombosis is precipitated by many factors capable of producing trauma, inflammation, stagnation, narrowing of the lumen, irregularities in the walls of the vessels or changes in the blood favoring thrombokinase. That infection has some relationship in post operative development of thrombosis, and embolism is suggested by the fact that both occur with greater frequency after operation for a ruptured appendix than unruptured appendix. Importance of infection is modified in other ways however; magnitude of the operation, location of the operation and the condition of the patient appears to be of some significance. Thus emboli occur twice as often after bilateral inguinal hernia as after an unilateral hernia. Any disease of the veins, such as varicose veins or the residual effects of an old thrombophlebitis, increase the chance of some thrombo-embolic episode after operation. Likewise, cardiac disease, such

Read before the Campbell-Kenton Medical Society, November 5, 1943.

as chronic valvular lesions, hypertensive, coronary or auricular fibrillation predisposes to thrombi or emboli. In fact, post mortem reports show that cardiac disease is more prevalent than any other condition.

The time of occurrence post operatively is striking. Most of the cases occur before the patient leaves the hospital. 50% occur between the 9th and 14th day. It is interesting to note that in a recent editorial in the A. M. A., that the blood platelets increased after the fourth day after operation or delivery and attained its maximum on the tenth day. This period of hyperthrombocytemia corresponds roughly with the period in which venous thrombosis generally occurs.

The prevention of thrombosis and embolisms up to the present time has been very unsatisfactory. Many different forms of treatment, medical measures, physical means have been suggested but none has proved to be the ideal solution to the problem. Of the newer forms of treatment, heparin has been the most effective. Unfortunately, in its present form and price, it is not suitable for generalized post operative use. It must be given intravenously in normal saline or 5% glucose, 20 mg. per hour is the usual dosage. When once started it must be continued for 7 to 10 days. Prompt return to normal coagulation time within a few hours follows the discontinuance of administration. Since heparin is expensive, when should it be used? In most patients in which there is a fatal embolism, multiple episodes of emboli have occurred. Therefore, it seems that heparin should be used on the first indication of an embolic phenomena to prevent further episodes. Unfortunately it has no effect on massive pulmonary embolism.

Another new drug which is not available at the present time to the profession, dicumerol, offers a better or a new means of combating embolism and thrombi. This can be given by mouth in capsules and will be much less expensive than heparin. However, with dicumerol the increase in the prothrombin time does not occur until 24 to 72 hours. Since most of our cases occur where the rapid anti coagulation effect of the blood is necessary, the administration of the dicumerol and heparin should begin at the same time. Heparin does not affect the prothrombin time. The determination of the prothrombin time is used as a measure for dicumerol only. When the pro-thrombin time of 35 seconds is reached, heparin can be discontinued. The only untoward effect associated with dicumerol and heparin is occasional bleeding. In most cases it is only minor but fatal cases have occurred. In serious bleeding, the discontinuance of heparin is all that is necessary, but since the anticoagulant factor of dicumerol remains for a number of days, the only effective procedure is the transfusion of whole blood.

The introduction of these two new drugs has opened up interest in the field of thrombosis and embolism, and we hope that future reports will bear out the good results of the early users.

ALLERGY IN INFECTIOUS DISEASES

Frank A. Simon, M. D.
Louisville

The clinical manifestations of disease popularly regarded as allergy result, to a great extent, from exposure to (a) Substances not derived from living things but having a synthetic or mineral origin (e. g. drugs, chemicals) or (b) Substances derived from living plant or animal organisms located outside the body and not capable of parasitic existence within the patient (e.g. egg, wheat, milk, pollen, fungus spores, animal danders.)

In several respects these substances—these allergens of non-living or non-parasitic origin—are the least important; the most important allergens being those derived from living organisms capable of parasitic existence within the human body, i. e., capable of producing infectious infestations. It is customary, however, and proper, to study infectious diseases from their other important aspects and they are therefore included in general medicine, general surgery as well as in the various medical specialties.

The purpose of this discussion is simply to point out the importance of the allergic concept in infectious diseases and to consider the allergic aspects of these diseases in outline form. It is necessary once more to call attention to the parallelism between infectious diseases in general and certain manifestations of allergy. In serum sickness, for example, there is a foreign substance, the serum, introduced into the body from without (analogous to the infectious agent); an incubation period (analogous to the incubation period of infectious diseases); a cutaneous eruption

(analogous to that of the exanthematous infectious diseases); and in both serum disease and infectious disease there may be changes in the leucocyte count, joint pains, general malaise, enlargement of the lymph nodes and (always in the former, frequently in the latter) convalescence and recovery. As far as the basic phenomena of allergic changes are concerned there seems to be little if any difference between the action of allergens of infectious microorganisms and those of certain other animals and plants which are not capable of parasitic existence in the tissues.

But there are some important differences of practical significance in regard to the resultant diseases. In the case of an infectious disease the infectious agent may produce, in addition to non-toxic allergens, substances which are primarily toxic; the agent may localize in and injure or destroy certain organs or tissues and in other ways complicate the situation so that recovery does not always occur. (Footnote: non-living allergens may also exhibit the phenomenon of specific tissue localization.) The infectious agent lives and reproduces and actively manufactures allergen in the body, whereas in serum sickness the amount of allergen involved is limited to that introduced from without. Another variant is the physico-chemical properties of the allergens involved. These differ considerably even among allergens derived from similar biologic sources and the variations are still greater when one considers allergens of very dissimilar origins (from living and non-living things, from parasites and non-parasites.) Such physico-chemical differences in allergens may account for some of the pathological and clinical differences which exist among infectious diseases. As an analogy for organ localization, for example, one might cite the case of ragweed pollen, which contains at least two separate and distinct allergens. The ether-soluble fraction sensitizes the epidermis, produces an eczematous reaction elicited by patch test but not by intradermal test; the water-soluble fraction sensitized tissues in the corium but not the epidermis, produces an urticarial reaction elicited by intradermal test but not by patch test.

The mechanisms whereby injury is produced in infectious diseases are to a great extent unknown; their explanation must await further developments in biochemistry, immunity and related fields. It is not the intention here to attempt to "explain" infectious diseases entirely on the basis of allergy but rather (a) To point out certain interesting correlations between allergic phenomena in infectious diseases and those in allergic manifestations to simple chemical compounds of non-living origin and to complex allergens of living but non-parasitic origin. (b) To indicate certain practical aspects of the allergic phenomena in infectious diseases, such as diagnostic skin tests. (c) To express the hope that, by correlation of the phenomena of allergy in infectious and non-infectious conditions and by the introduction of the concept of allergy, as Von Pirquet said in his original discussion of this subject, "the study of the interesting phenomena in this field will be made easier for new co-workers."

The concept of allergy has been applied to the study of many infectious diseases. While evidence of allergy has been found in most of these, in none perhaps, are the findings better illustrated than in tuberculosis.

Tuberculosis: A primary infection (in laboratory animal or man) with the tubercle bacillus results in an inflammatory reaction which, in a few days, is characterized by a predominence of polymorphonuclear cells. The character of the cellular reaction soon changes, however. After one to several weeks the predominating cells are lymphocytes and other mononuclear cells (epitheloid cells). Giant cells and typical tubercle formation may occur. With the appearance of this granulomatous structure the tuberculin test becomes positive.

A re-infection results in very rapid development of the tuberculous structure at the site of inoculation, practically without an incubation period. If the virulence of the infecting microorganisms and host resistance are such that healing occurs, this healing process is completed much more rapidly than in the first infection. The second infection, in other words, shows in rapid motion what occurred in slow motion with the first infection. (An altered reaction to the infectious agent due to previous contact with the same specific agent.)

Tuberculin, an extract of the tubercle bacillus, contains no demonstrable toxins and is not injurious to normal, non-infected individuals. In such individuals it may be injected into the skin or even intraven-

ously without ill effect. In previously infected individuals, however, its injection into the skin results in the well known inflammatory reaction or positive tuberculin test, which reaches its peak in 24 to 48 hours. This reaction indicates that there is at present or has been in the past an infection with the tubercle bacillus. As a rule it gives no information regarding the clinical activity of the lesion and, of course, by no means proves that the patient's present illness is tuberculosis because any one with a present or past tuberculous infection may also have an infection with some other organism or may be suffering from any other non-tuberculous disease. Thus it is apparent that a tuberculous infection results in some sort of conditioning of the infected individual so that his future response to contact with the tubercle bacillus (or its products) is specificially altered.

It is interesting to compare these findings with those which occur following the injection of human blood serum, turtle's egg, or even a relatively simple chemical compound such as neo-arsphenamine into the skin of a guinea pig. After an incubation period of five to ten days or longer a local lesion develops in some of the animals at the site of injection. After a time, with or without ulceration, healing occurs and the lesion disappears. A second injection of the same substance results in the rapid development of a lesion without the primary incubation period, as in the infectious disease.

Syphilis: The primary, secondary and tertiary lesions of this disease have been explained as allergic phenomena. The treponems have not been shown to elaborate any primarily toxic substance and do not produce lesions until after the incubation period has permitted allergy to develop. Many interesting and complicated problems arise in the study of this condition but they cannot be considered here. Suffice it to say that there are many analogies with tuberculosis and with reactions to non-living allergens. Skin reactions to extracts of the organisms (luetins) are demonstrable.

Fungus Infections of the Skin: (Dermatomycoses). These infections are characterized (as are all infections) by an incubation period and by a changed reaction to reinfection, including absence of incubation period, more rapid course and more rapid healing of the second infection. Positive skin reactions to extracts of the organisms (Trichophytins) are readily demonstrated. Owing to the fact that these infections are of such common (almost universal) occurrence the trichophytin skin reaction, like the tuberculin test, has considerable limitation as a diagnostic test.

The Concept of "Ids": According to this concept living microorganisms or their products, emanating from some focus (by way of the blood or lymphatic streams), reach a specifically sensitized local skin site and there, as a result of the ensuing allergic reaction, produce local lesions. (Compare with the general concept of foci of infection). Trichophytids from trichophyton fungi, tuberculids from tubercle bacilli, syphilids from treponema pallada, etc. are described. In the case of trichophytids and tuberculids it is impossible or very difficult to demonstrate the organisms in these secondary lesions. The explanation given is that they are rapidly destroyed in these locations. Many different morphologic types of tuberculids, syphilids and trichophytids are described in the dermatologic literature. Sulzberger lists more than seventeen types of trichophytids.

Small Pox (Variola and Vaccinia): Small pox vaccination presents several interesting analogies with other infectious diseases and with experimental sensitization of laboratory animals to non-living allergens. After primary inoculation with the virus an incubation period of several days (for development of allergy) must elapse before the lesion makes its appearance. It continues to develop with redness, swelling and ulceration. If a second inoculation is made several days after the first, the second lesion develops more rapidly and both reach the state of healing at approximately the same time. Healing occurs as immunity develops. The reaction to subsequent inoculations varies somewhat in different individuals. There may be complete absence of visible reaction, slight or moderate erythema, erythema with some swelling. These reactions all occur without incubation period and are visible in 24 to 48 hours like the usual delayed or tuberculin-type reaction. Another reaction sometimes observed is a lesion similar to that of the primary inoculation but having a shorter incubation period.

Diphtheria: The diphtheria bacillus, unlike the infectious agents of those diseases previously discussed, produces a primary toxin, a substance injurious to persons not

previously exposed to its influences. The chief immunologic response in diphtheria is apparently the production of antitoxin —a substance which neutralizes this toxin. If one wishes to accept a broad concept of allergy—all specifically acquired alterations in the capacity to react—this phenomenon obviously falls within the definition. Its effects are however, in some respects, directly opposite to those previously discussed, as may be illustrated by the Schick test. This test for susceptibility to diphtheria is made by injecting bacterial filtrate containing the specific toxin into the skin. An inflammatory reaction, visible in 24 to 48 hours, indicate absence of previous infection, absence of antitoxin, absence of immunity. (Compare with a positive tuberculin test which indicates previous infection but gives no definite information regarding immunity.) A negative Schick reaction indicates previous infection or artificial immunization, antitoxin in the tissues, immunity to the disease. (Compare with a negative tuberculin test which as a rule, indicates absence of previous infection.) In addition to antitoxin immunity other allergic phenomena may be observed in this disease. One of these, observed in some persons, is analogous to the tuberculin test and may interfere with the interpretation of the Schick test. In some cases it is found that repeated attempts to produce artificial immunity (with toxin-antitoxin) fail to result in a negative Schick test. There are two explanations. 1. A weak immunologic response to the attempted immunization. 2. Acquired hypersensitiveness to some product of the bacteria which may or may not be accompanied by immunity. As an aid in the interpretation of the test a Schick test "control" may be made. This is done by injecting the heated bacterial filtrate into the skin. The toxin is destroyed by heat, therefore a positive reaction to the control proves the existence of hypersensitiveness to some nontoxic product. A negative reaction to the control proves the absence of such hypersensitiveness. Hence it is apparent that 1. A positive Schick test with a negative control indicates susceptibility to the toxin. 2. A positive Schick test with a positive control indicates hypersensitiveness with or without immunity. 3. A negative Schick test with a negative control indicates immunity. 4. A negative Schick test with positive control never occurs with proper technique.

The diseases discussed thus far include infections with a toxin-producing bacillus, a non-toxin-producing bacillus, a spirochete, a filtrable virus and fungi. These will serve as examples. In addition, evidence of allergy has been found in many other infections including the following diseases: Moniliasis, Coccidiosis, Sporotrichosis, Actinomycosis, Anthrax, Glanders, Undulant Fever, Chancroid, Lymphogranulomatosis Inguinalis, Leprosy, Leishmaniasis, Trypanosomiasis, Febris Recurrens, Staphylodermas, Streptodermas, Pneumococcus infections, Erysipeloid, Herpes Simplex, Herpes Zoster and Chicken Pox, Tularemia, Parasitic infestations (Echinococcus, Ascaris, Strongyloides, Bilharzia and probably all helminths), Frambesia, Malaria, Blastomycosis, Lymphangitis Epizootica, Animal Pox, Bubonic Plague, Typhoid Fever, Granuloma Venereum, Hoof and Mouth disease, Scarlet Fever, Gonorrhoea, Typhus Exanthematicus, Bacillary Dysentery etc. It must be apparent to all that to designate a phenomenon as allergic is simply to place it in a class with other related phenomena. The many and undoubtedly complicated physico-chemical processes involved in these phenomena remain to be explained. Hence the concept of allergy is essentially a point of view to be held for its practical value and for its theoretical value in the further elucidation of disease.

From Simon. Frank A., Allergy. in Specialties in Medical Practice. Edited by E. V. Allen, New York, Thomas Nelson & Sons. 1942, Volume 1.

BOOK REVIEW

GASTRO-ENTEROLOGY: By Henry L. Bockus, M. D., Professor of Gastro-enterology, University of Pennsylvania Graduate School of Medicine. In three volumes, totaling about 2700 pages with about 900 illustrations, many in colors. Volume II—"Intestines and Peritoneum". 975 pages with 176 illustrations, 12 in colors. Philadelphia and London: W. B. Saunders Company, 1944. Price, 3 Vols. and separate desk index, $35.00.

This book is the second volume of what might be called an encyclopedia of present day knowledge of gastro-intestinal diseases and their specific diagnosis and treatment, the third volume will appear shortly. Volume II discusses diseases of the small and large intestines, the colon and peritoneum. Especially important are the discussions of regional ileitis, tuberculosis of the intestines, steatorrhea, intestinal obstruction, diarrhea and colonic neurosis. The entire volume is exceptionally well illustrated, many being in color.

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NEXT ANNUAL MEETING LEXINGTON, SEPTEMBER 18, 19, 20, 1944

COUNTY SOCIETY REPORTS

Breckinridge: The annual meeting of the Breckinridge County Medical Society was held in Hardinsburg, at which time the following officers were elected: President, B. H. Parrish; Vice President, O. E. Ferguson; Secretary-Treasurer, John E. Kincheloe; Delegate, John E. Kincheloe; Board of Censors: B. H. Parrish, O. E. Ferguson and J. E. Matthews.

John E. Kincheloe, Secretary.

Campbell-Kenton: The regular meeting of the Campbell-Kenton County Medical Society was held at St. Elizabeth Hospital on Thursday, April 6, 1944 with sixteen members and eight guests present. The meeting was called to order by the president, O. W. Frickman, at 9:05 P. M. The minutes of the last meeting were read and approved.

The following communications were received:

A letter from Dr. P. E. Blackerby concerning the dues of members in the armed forces. Since the society had previously voted to suspend their dues, no action was taken.

A letter of appreciation for our invitation to the Southern Medical Association to meet in Cincinnati was read from Mr. C. P. Loranz.

Harry F. Mann of Walton, requests affiliation with the Campbell-Kenton County Medical Society since Boone County has no active Medical Society. An application blank has been mailed to Dr. Mann.

Applications for membership from Drs. William A. Foertmeyer and John Batte were referred to the Board of Censors.

Drs. Edward B. Mersch and Arthur J. Schwertman were appointed as a committee to review the papers by Dr. Charles Reynolds.

A motion was made by Dr. Charles Baron and seconded by Dr. Wm. R. Miner to approve the Standing Orders for the Visiting Nurse Service of the Metropolitan Life Insurance Company. Motion passed.

The program of the evening consisted of an interesting and instructive lecture by Vinton Siler on "The Treatment of Burns" illustrated with lantern slides and movies. Considerable discussion followed and many questions were asked.

There being no further business, the meeting was adjourned.

Robert L. Biltz, Secretary.

Clinton: The annual meeting of the Clinton County Medical Society was held in Albany. The following officers were elected: President, S. W. Bristow; Vice President, E. A. Barnes; Secretary-Treasurer, S. F. Stephenson; Board of Censors: S. W. Bristow, E. A. Barnes, and S. F. Stephenson.

S. F. Stephenson, Secretary.

Cumberland: The annual meeting of the Cumberland County Medical Society was held in Burkesville. The following officers were elected: President, H. G. Davis; Vice President, Wm. Fayette Owsley; Secretary-Treasurer, Wm. Fayette Owsley; Delegate, Wm. Fayette Owsley; Board of Censors: H. G. Davis and Wm. Fayette Owsley.

Wm. Fayette Owsley, Secretary

Floyd: The annual meeting of the Floyd County Medical Society was held in Martin, at which time the following officers were elected: President, J. H. Allen; Vice President, J. R. Chitwood; Secretary-Treasurer, Robert M. Sirkle.

Robert M. Sirkle, Secretary.

Hart: The annual meeting of the Hart County Medical Society was held in Munfordville. The following officers were elected: President, J. W. York; Vice President, J. H. Botts; Secretary-Treasurer, Vincent Carrao; Delegate, D. E. Upton.

Vincent Carrao, Secretary

Jefferson: The 878th stated meeting of the Jefferson County Medical Society was held Monday evening, March 20, with 47 members and guests present. The President called the meeting to order at 8:07.

Dr. J. B. Lukens, Chairman of the Public Relations Committee, read a report stating that the committee had considered the question of improving conditions in the doctor's waiting room and the committee believed this was an individual matter and that its solution must be worked out on this basis.

The President asked M. G. Buckles to take over the chair while he conducted some unfinished business.

Dr. Weeter read a communication from Col. Morris C. Thomas, Commanding Officer at the Station Hospital, Ft. Knox, requesting suggestions for the hospital care in Louisville of civilians injured on the highway near Ft. Knox, civilian dependents of civilians employed at the Post, or civilian dependents of military personnel, who are not emergency in character.

At the January meeting the Society voted to have a special committee appointed to confer with the Medical Economics Committee and Dr. Weeter was made chairman of that committee. A letter was written to the members of the Medical Economics Committee regarding the matter. Dr. Weeter read the reply of the Chairman of the Medical Economics Committee, to the effect that Col. Thomas's request should have been referred to Committee on Medical Economics for consideration since it deals with professional service and hospitals.

Since the Medical Economics Committee had done nothing further, the matter was brought up at this time by Dr. Weeter because it was felt that courtesy required that the Society reply to Col. Thomas' letter.

There was some discussion as to whether the committee appointed by the President had authority to act and it was the concensus of opinion that whatever disposition this committee decided upon would be valid.

Since the special Committee for investigation of hospital needs and medical care for families at Ft. Knox military area had conferred with the Medical Economics Committee and received their reply, Dr. Weeter made a motion that a summary of this request be sent to the members of the Jefferson County Medical Society with request that if they wish to have these cases referred to them to turn their names in to the Secretary of the Society who will send this panel to Col. Thomas. Motion seconded by Dr. Sherrill, put to a vote and passed.

The President resumed the chair.

The Secretary read a letter from the Louisville Civilian Board stating that the Louisville and Jefferson County Health Department is urgently in need of the services of a physician on part-time basis at their clinic, 240 East Madison, for the hours 11 a. m. to 1 p. m. Monday through Saturday.

Scientific Program was as follows:

Essay: Latent Period in Diagnosis of Skeletal Tuberculosis (Slides) Chas. F. Wood.

Essay: Undulant Fever, Harry S. Frazier. Discussion by Austin and Oscar Bloch, Jr., with closing remarks by Dr. Wood. The meeting adjourned at 9:45 P. M.

Richard T. Hudson, Secretary.

Jefferson: The 879th stated meeting of the Jefferson County Medical Society was held Monday evening, April 3, with 45 members and guests present. The President called the meeting to order at 8:07.

The Secretary read the minutes of the previous meeting and they were approved as read.

M. G. Buckles reported concerning the committee appointed for the cooperation with Col. Thomas at Ft. Knox. Requests have been sent to all the doctors of the Society asking them to signify their willingness to cooperate. To date, thirty affirmative replies have been received. These will be forwarded to Col. Thomas and other names that come in will be added to that list.

The Secretary read the names of two pro-

posed members passed on by the Judicial Committee: Elbert L. Dennis, M. D., and L. Douglas Atherton, M. D. It was moved and seconded that these names be accepted for membership, put to a vote and they were unanimously elected.

The President read a communication from the Library requesting that he announce that the Library is in need of medical journals, particularly the specialties, as extra copies are needed to lend to nearby hospitals.

Scientific Program: 8:15.

Case Report: Pregnancy with Acute Poliomyelitis, Alice L. Wakefield, M. D.

Essay: Eighteen Months' Experience on the Army Induction Board, John J. Moren, M. D.

The essay was discussed by W. E. Gardner and Major Atkinson.

Meeting adjourned at 9:18. ..

Richard D. Hudson, Secretary.

Jessamine: The annual meeting of the Jessamine County Medical Society was held in Nicholasville, at which time the following officers were elected: Secretary, J. A. Van Arsdall; Delegate, C. A. Neal.

J. A. Van Arsdall, Secretary

Madison: The regular monthly meeting of the Madison County Medical Society was held in Draper Hall, Berea, at 7:30, Thursday, March 9, 1944.

Mr. Perkins of the Sanitary Engineering Department of the State Board of Health gave a talk and showed a sound film on the transmission of disease by cross connections in plumbing.

Dr. Louise Hutchins, of the Berea College, gave a very interesting paper and case history of the RH factor in the etiology of anemia of infancy.

The senior nursing class of Berea College attended the scientific program which was followed by the business meeting.

The minutes of the previous meeting were read by the secretary and approved as read.

A motion was made by Dr. J. W. Armstrong to accept the applications for membership of Frank M. Melton, S. Young, and Taylor. This motion was seconded by Dr. A. F. Cornelius and passed unanimously.

Meeting adjourned at 9:15 P. M.

Frank M. Melton, Secretary.

Madison: The regular monthly meeting of the Madison County Medical Society was held at the Trachoma Hospital, Richmond, Thursday, April 13, 1944 at 7:30 P. M.

Dr. Arthur Bach, cardiologist of Lexington, presented a film on heart diseases and a discussion of some of his own cases.

Frank M. Melton, Secretary

Metcalfe: The annual meeting of the Metcalfe County Medical Society was held in Edmonton at which time the following officers were elected: President, S. R. York; Vice-President, W. G. Depp; Secretary, E. S. Dunham; Delegate, E. S. Dunham.

E. S. Dunham, Secretary.

Owen: The annual meeting of the Owen County Medical Society was held in Owenton, at which time the following officers were elected: President, J. H. Chrisman; Vice-President, George Purdy; Secretary-Treasurer, K. S. McBee.

K. S. McBee, Secretary

Perry: The regular monthly meeting of the Perry County Medical Society was called to order by the President, Z. M. Abshear, March 14th in the Health Department offices.

The minutes of the previous meeting were approved as read.

The Secretary, J. P. Boggs, read a letter from the Kentucky State Medical Association, asking that the members of the Society send in any news that might be of interest to the profession, which can be published in the Journal.

Dr. James Fraser, Medical Director of the Frontier Nursing Service at Hyden, presented a very interesting paper on, Continuous Caudal Analgesia in Obstetrics. Several of the members discussed Dr. Fraser's paper.

The following members were present: A. W. Adkins, J. P. Boggs, Boyd Baker, Z. M. Abshear, James Fraser, A. O. Morgan, C. B. Combs, R. L. Collins, C. D. Snyder, C. S. Jackson, B. M. Brown, and H. K. Knoch.

The Perry County Medical Society now has 26 active members.

The regular meeting night has been changed to the second Tuesday night each month. The society adjourned at 8:45 P. M.

J. P. Boggs, Secretary.

Pulaski: The annual meeting of the Pulaski County Medical Society was held in Somerset. The following officers were elected: President, W. R. Cundiff; Vice President, R. F. Jasper; Secretary-Treasurer, R. G. Richardson; Board of Censors: J. H. Horton and Brent Weddle.

R. G. Richardson, Secretary.

Union: The Union County Medico-Dental Society met at 8:00 P. M. April 4, at the Union County Health Department in Morganfield.

A motion picture on Cancer of the Female Breast was shown.

The following members were present: C. B. Carr, D. M. Sloan, H. B. Stewart, Bruce Underwood.

Bruce Underwood, Secretary

NEWS ITEMS

Dr. Jno. J. Moren announces the opening of an office, 76 Weissinger-Gaulbert Building, Third and Broadway, Louisville. Practice limited to Neurology. Hours: by appointment only.

Lieutenant Harry E. Walker, Navy Medical Corps, Glendale, has been commended for his work in treating the wounded on the U. S. S. Minneapolis during the battle which took place off Guadalcanal on November 30, 1942. The thirty-five men most seriously wounded were transferred to a hospital at Tulagi and not one required further operative treatment. Lieut. Walker graduated from the University of Louisville School of Medicine in 1939, was then assigned to the Mayo Clinic for special work. He entered the service August, 1941.

Captain J. Andrew Bowen, Louisville, is visiting his family after twenty months service in the South Pacific. Most of his foreign service was performed in the New Hebrides, where he was an executive officer of a hospital located right behind the front lines.

Dr. Lewis C. Coleman, age 45, a native of Harrodsburg, and former Director of the Perry County Board of Health, died in a Hazard Hospital on March 29th.

Dr. Chester Arthur Stebbins, 60, Lexington, a physician for fourteen years, died at his home in Lexington April 10th. He formerly practiced in Memphis and St. Louis and was a member of the Army Medical Corps during the World War.

Dr. Eunice Greenwood, Louisville, has resigned her post as pathologist at Norton Memorial Infirmary, and has accepted a position in the pathology department of St. Thomas Hospital, Nashville.

Dr. Hal E. Houston, Mayfield, has been promoted to captain and is now a member of the Neuro-Surgical Department of an Evacuation Hospital in England.

The tenth annual meeting of the Mississippi Valley Medical Society will be held at the Pere Marquette Hotel, Peoria, Illinois, September 27 and 28th. The Scientific Exhibits will be a feature this year as well as the usual commercial exhibits.

BOOK REVIEW

LABORATORY METHODS OF THE UNITED STATES ARMY: Edited by James Stevens Simmons, M. D., Ph.D., D. P. H., Sc.D. (Hon.) Brigadier General, United States Army; Chief of the Preventive Medicine Service, Office of The Surgeon General United States Army; Lecturer, Department of Preventive Medicine, Johns Hopkins University Medical School; etc.; and Cleon J. Gentzkow, M. D., Ph. D., Colonel, Medical Corps, United States Army; Commanding Officer, Deshon General Hospital, Butler, Pennsylvania. Octavo, 823 pages, illustrated with 103 engravings and 8 color plates. Approved by the Surgeon General of the United States Army.

Fifth edition published 1944, Lea and Febiger, Washington Square, Philadelphia 6, Pa., Publishers. Price Fabrikoid $7.50.

The present fifth edition of the Laboratory Methods of the United States Army has been prepared to meet the current war time needs. It offers a valuable reference work of officers and technicians who are called upon to assume responsibility for enormously expanded laboratory services. The book has been revised throughout in order to bring it up to date and many sections have been entirely rewritten. In its present form it is an excellent hand book, not only for the armed services, but for the medical practitioner, bacteriologist, hygienist, sanitariam and veterinarian. It describes practical methods for use in all medical and sanitary laboratories.

This edition represents the experience of workers handling thousands of specimens under conditions enabling complete control. The theories or concepts of fundamentals are so fully presented as to enable the reader to interpret definitely the findings. An interesting feature is the section on statistical methods—the application of mathematics to the analysis of experimental or clinical data. The volume is not however restricted to technical procedures. Clinical pathology, chemistry, mycology, bacteriology, protozoology, helminthology, entomology and special veterinary methods are all included. The contributors include outstanding members of the Medical, Veterinary and Sanitary Corps of the Army as well as teachers of note at various universities. This edition is enhanced by the inclusion of valuable colored plates and is presented in a format well adapted to laboratory use. The work is indispensable to every physician and laboratory worker.



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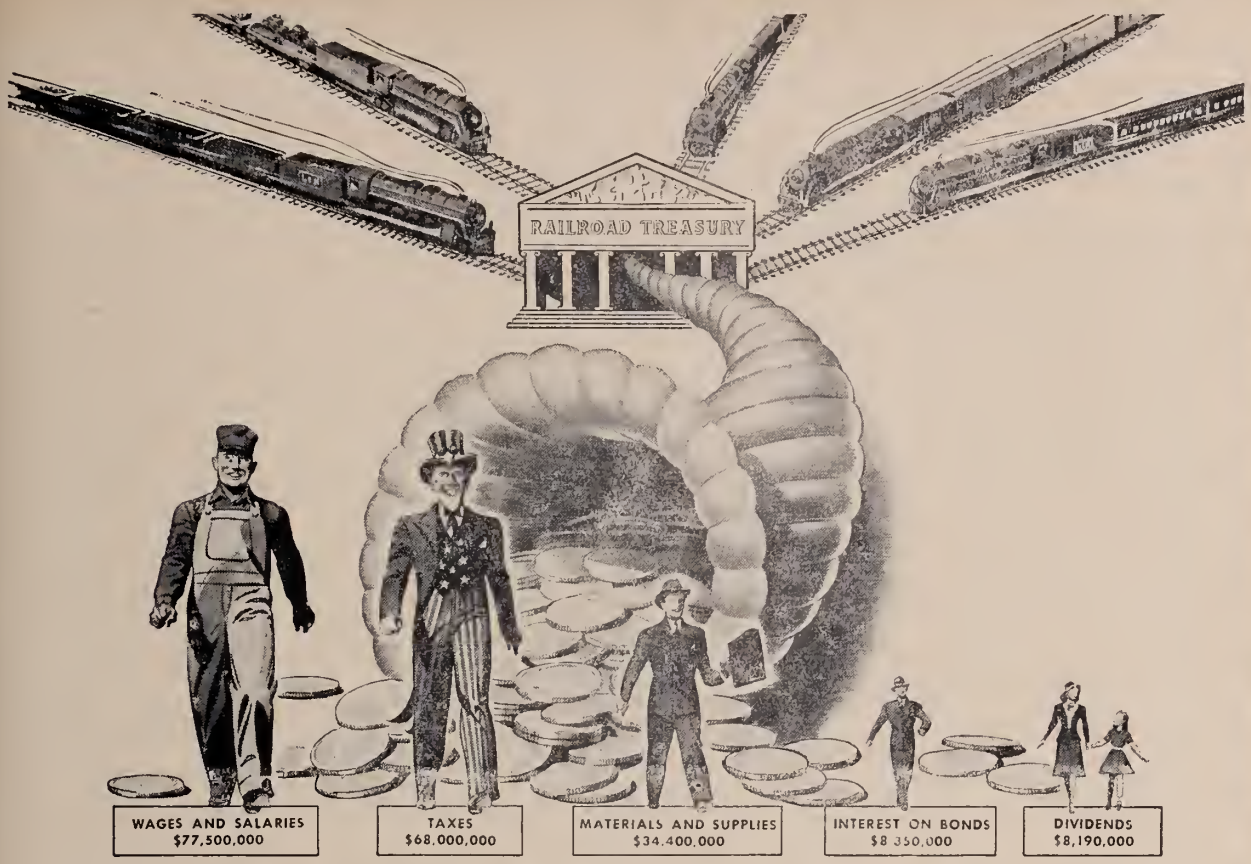
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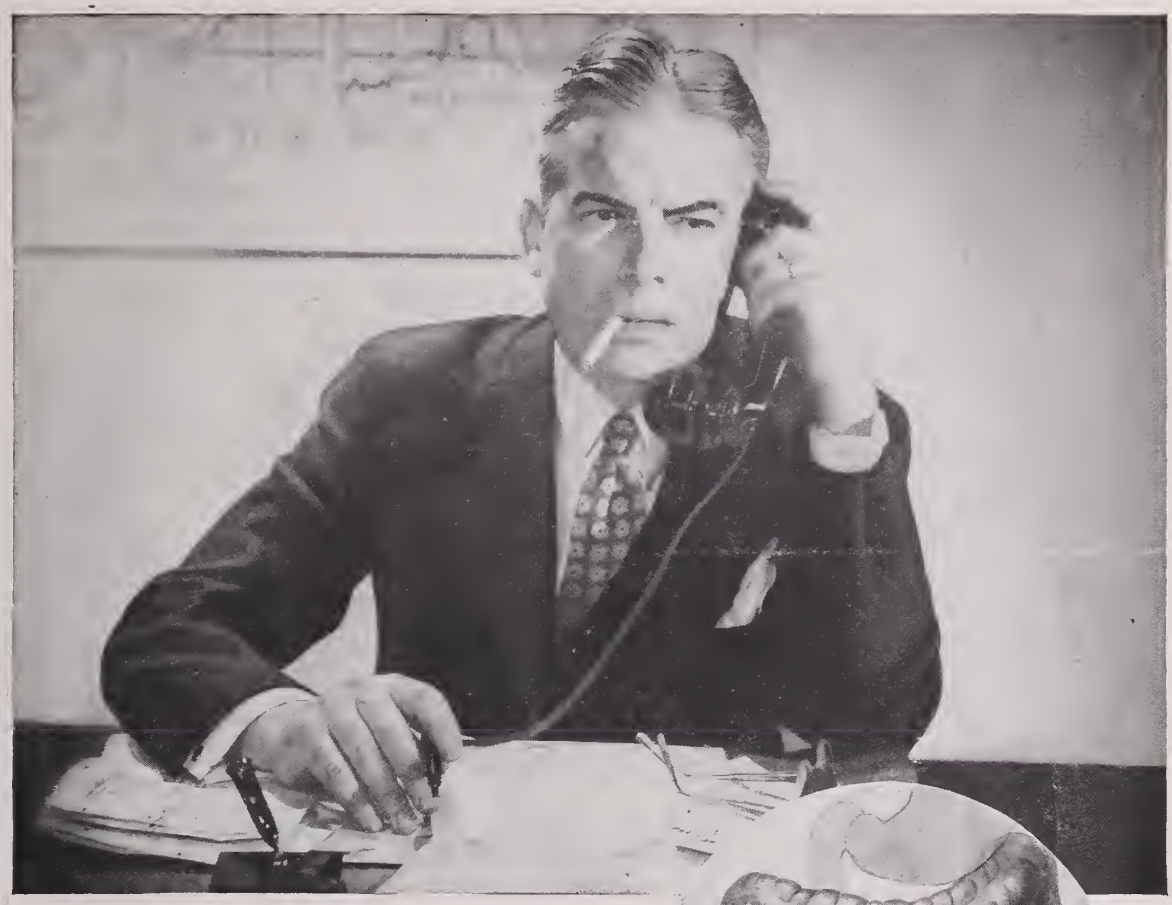
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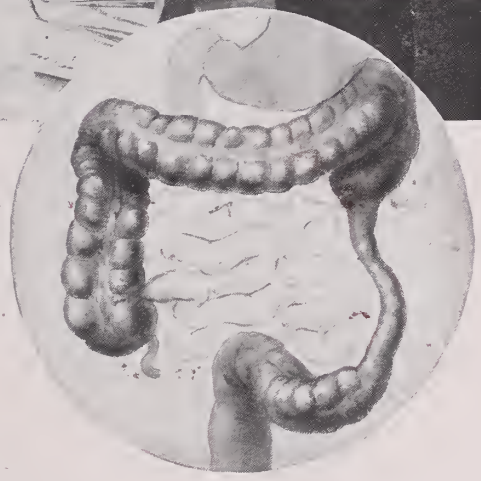
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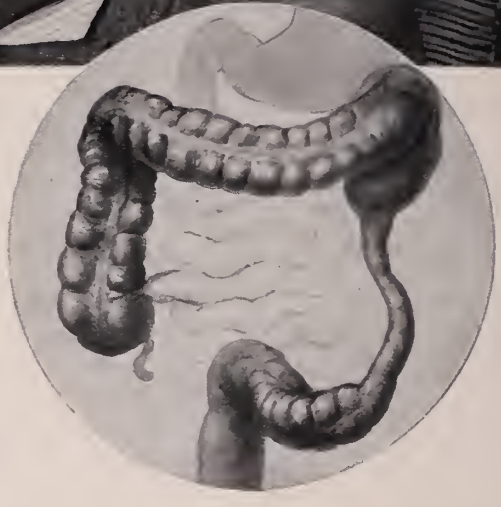


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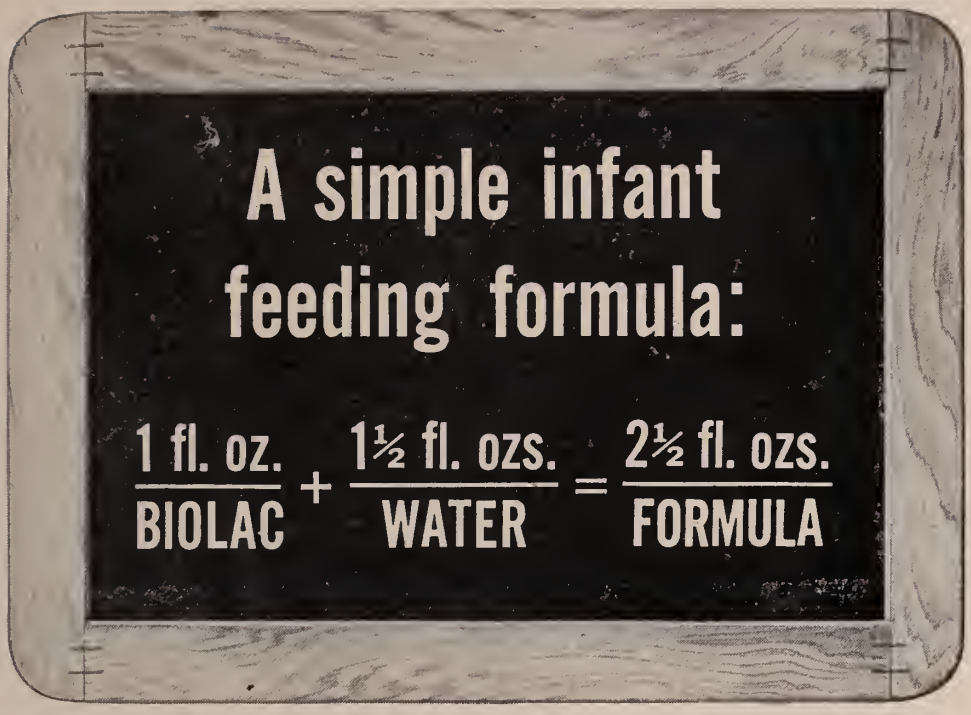
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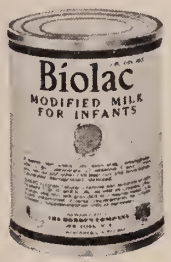
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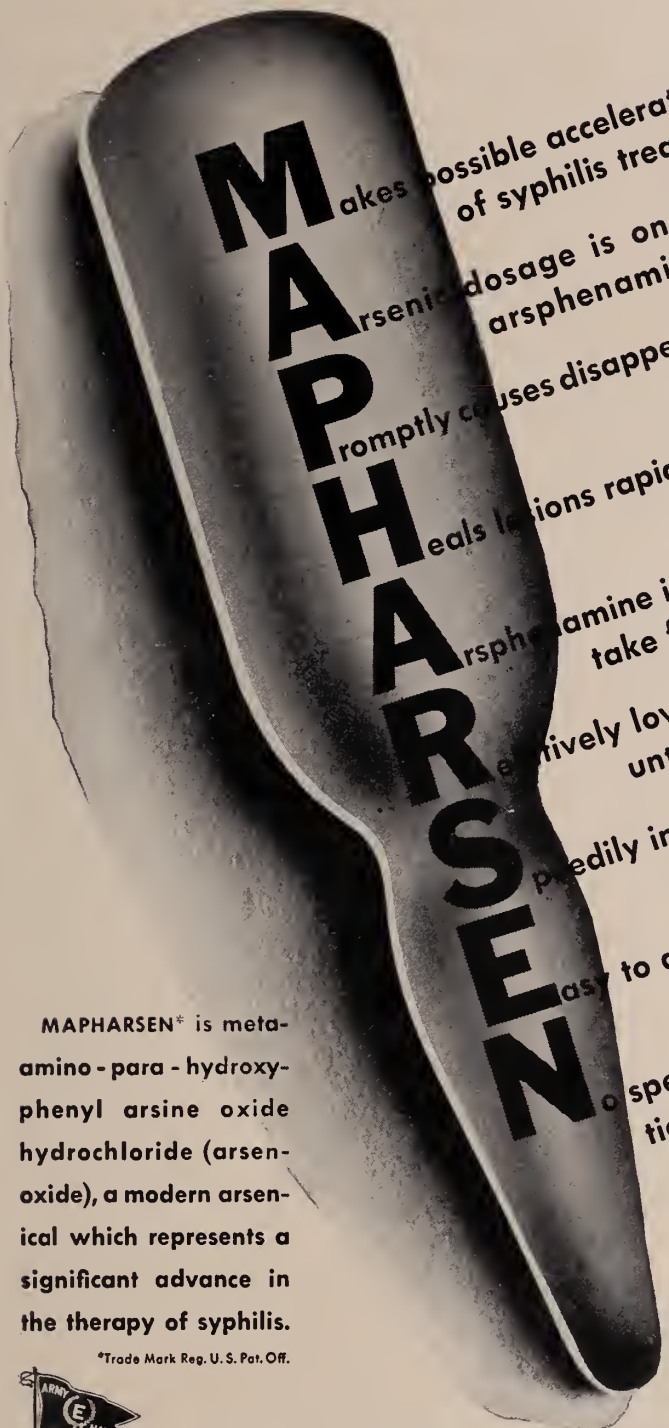
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Allen	A. O. Miller	Scottsville	June 28
Anderson	J. B. Lyen	Lawrenceburg	June 5
Ballard	F. H. Russell	Wickliffe	June 13
Barren	C. R. Markwood	Glasgow	June 21
Bath	H. S. Gilmore	Owingsville	June 12
Bell	Edward S. Wilson	Pineville	June 9
Boone	R. E. Ryle	Walton	June 21
Bourbon	George M. Jewell	Paris	June 15
Boyd	Price Sewell, Jr.	Ashland	June 6
Boyle	P. C. Sanders	Danville	June 20
Bracken-Pendleton	W. A. McKenney	Falmouth	June 22
Breathitt	M. E. Hoge	Jackson	June 20
Breckinridge	J. E. Kincheloe	Hardinsburg	June 8
Bullitt	George B. Hill	Mt. Washington	
Butler	D. G. Miller, Jr.	Morgantown	June 7
Caldwell	W. L. Cash	Princeton	June 6
Calloway	J. A. Outland	Murray	June 1
Campbell-Kenton	Robert L. Biltz	Newport	June 1
Carlisle	E. E. Smith	Bardwell	June 6
Carroll	H. Carl Boylen	Carrollton	
Carter	Don E. Wilder	Grayson	June 13
Casey	Wm. J. Sweeney	Liberty	June 22
Christian	H. B. Stone	Hopkinsville	June 20
Clark	W. Carl Grant	Winchester	June 16
Clay	L. H. Wagers	Manchester	June 13
Clinton	S. F. Stephenson	Albany	June 17
Crittenden	C. G. Moreland	Marion	June 12
Cumberland	W. F. Owsley	Burkesville	June 7
Daviess	Frank J. Condon	Owensboro	June 13 & 27
Estill	Virginia Wallace	Irvine	June 14
Fayette	Charles D. Cawood	Lexington	June 13
Fleming	Roy Orsburn	Flemingsburg	June 14
Floyd	Robert Sirkle	Weeksbury	June 28
Franklin	E. K. Martin	Frankfort	June 1
Fulton	John G. Samuels	Hickman	June 14
Gallatin	J. M. Stallard	Sparta	June 15
Garrard	J. E. Edwards	Lancaster	June 15
Grant	Wallace Byrd	Williamstown	June 21
Graves	H. H. Hunt	Mayfield	June 6
Grayson	E. B. Deweese	Caneyville	
Green	S. J. Simmons	Greensburg	June 5
Greenup	Virgil Skaggs	Russell	June 9
Hancock	F. M. Griffin	Hawesville	June 5
Hardin	D. E. McClure	Elizabethtown	June 8
Harlan	W. R. Parks	Harlan	June 17
Harrison	W. B. Moore	Cynthiana	June 5
Hart	Vinson Corrao	Munfordville	June 6
Henderson	Walter L. O'Nan	Henderson	June 12 & 26
Henry	Owen Carroll	New Castle	June 8
Hickman	H. E. Titsworth	Clinton	June 1
Hopkins	Wm. H. Garnier	Madisonville	June 8
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Jessamine	J. A. VanArsdall	Nicholasville	June 22
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Lee	A. B. Hoskins	Beattyville	June 10
Letcher	Owen Pigman	Whitesburg	June 27
Lewis	Elwood Esham	Vanceburg	June 19
Lincoln	Lewis J. Jones	Hustonville	June 16
Livingston	T. L. Radcliffe	Smithland	
Logan	E. M. Thompson	Russellville	June 7
Lyon	H. H. Woodson	Eddyville	June 6
McCracken	Leon Higdon	Paducah	June 28
McCreary	R. M. Smith	Stearns	June 5
McLean	F. L. Johnson	Livermore	June 8
Madison	Scott McGuire, Jr.	Berea	June 15
Magoffin	Lloyd M. Hall	Salyersville	
Marion	Nelson D. Widmer	Lebanon	June 27
Marshall	S. L. Henson	Benton	June 21

COUNTY	SECRETARY	RESIDENCE	DATE
Mason	C. W. Christine	Maysville	June 14
Menifee	E. T. Riley	Frenchburg	
Mercer	J. Tom Price	Harrodsburg	June 13
Metcalfe	E. S. Dunham	Edmonton	June 6
Monroe	Geo. E. Bushong	Tompkinsville	
Montgomery	D. H. Bush	Mt. Sterling	June 13
Muhlenberg	E. L. Gates	Greenville	June 13
Nelson	Keith Crume	Bardstown	June 21
Nicholas	T. P. Scott	Carlisle	June 19
Ohio	Oscar Allen	McHenry	June 7
Owen	K. S. McBee	Owenton	June 1
Owsley	W. H. Gibson	Booneville	June 5
Perry	J. P. Boggs	Hazard	June 12
Pike	S. B. Casebolt	Pikeville	June 1
Powell	I. W. Johnson	Stanton	June 5
Pulaski	Robert G. Richardson	Somerset	June 8
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Rockcastle	Robert G. Webb	Livingston	June 2
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Russell	J. R. Popplewell	Jamestown	June 12
Scott	H. V. Johnson	Georgetown	June 1
Shelby	C. C. Risk	Shelbyville	June 15
Simpson	N. C. Witt	Franklin	June 13
Spencer	M. H. Skaggs	Taylorsville	
Taylor	L. S. Hall	Campbellsville	June 8
Todd	B. E. Boone, Jr.	Elkton	June 7
Trigg	Elias Futrell	Cadiz	
Union	E. Bruce Underwood	Morganfield	June 6
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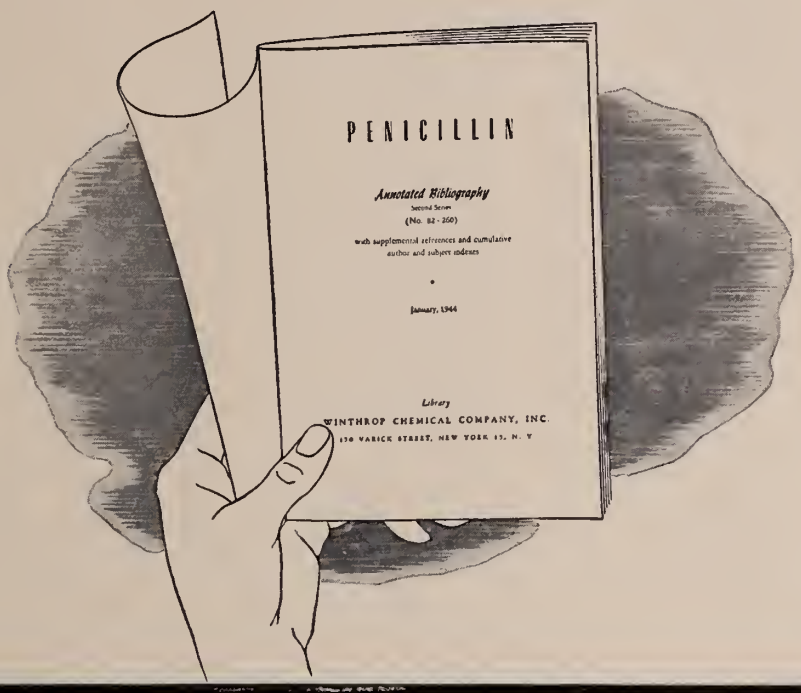
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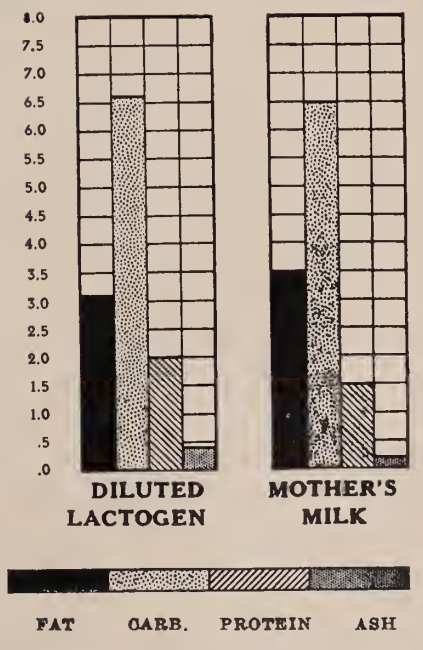
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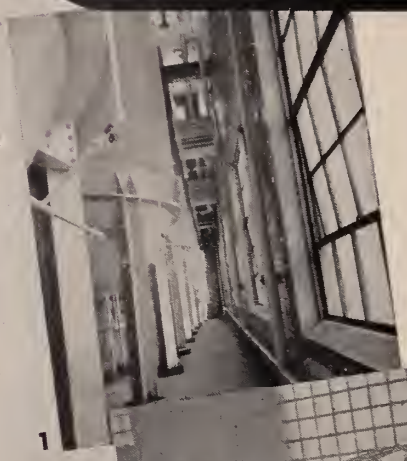
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John Lovett Morse, A. M., M. D.
Clinical Pediatrics, p, 156



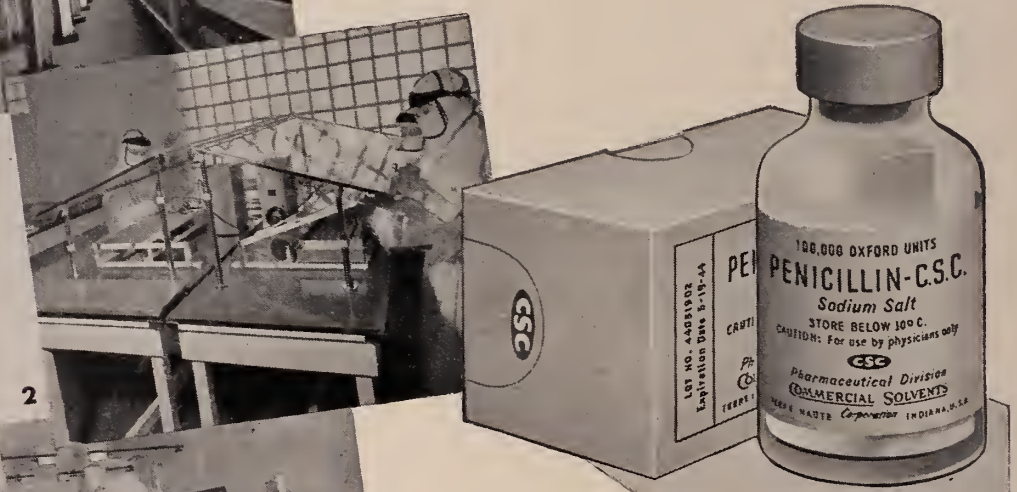
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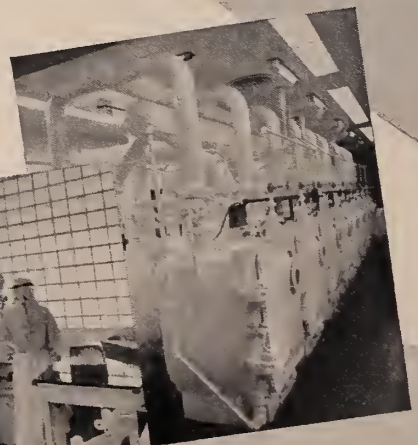
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2



3



4



5

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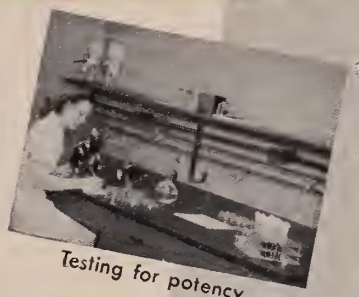
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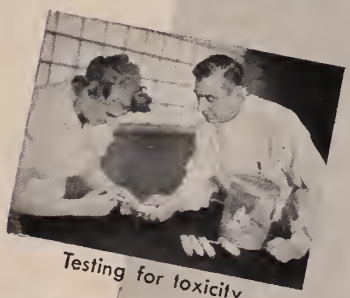
This combination of mass production methods, skilled personnel, the utmost in safeguards, and unremitting laboratory control spells two assurances—

Penicillin-C.S.C. will always be of dependable potency, sterility, and pyrogen-freedom—

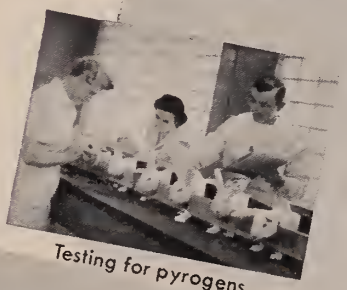
Penicillin-C. S. C., now allocated as the armed forces direct, will be available in adequate distribution throughout the country as soon as released.



Testing for potency



Testing for toxicity



Testing for pyrogens

PHARMACEUTICAL DIVISION

COMMERCIAL SOLVENTS Corporation

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Terre Haute, Ind.

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Capacity conservatively rated at 40,000,000,000 (forty billion) Oxford Units per month.

BROADENING THERAPEUTIC APPLICATIONS OF *Estrogenic Hormones*

It was only a few years ago that medical writers were inclined to question the potency and therapeutic efficacy of estrogenic substances. Today, with well defined standards of activity, and with preparations of a purity and activity unheard of less than two decades ago, estrogenic hormones have a well established place in medical practice.

The broadening therapeutic application of estrogenic hormones is well documented by acceptance of the Council on Pharmacy and Chemistry of uses which, in some instances, were unheard of five years ago. At present the accepted uses include the following:

Menopausal symptoms . . . Senile vaginitis . . . Kraurosis vulvae . . . Gonorrheal vaginitis of children . . . Painful engorgement of the breasts in puerperium . . . Careinoma of prostate . . . Functional uterine bleeding of probable endoerine origin . . . Suppression of lactation under certain conditions.



Amniotin—a solution of natural estrogens—is available in a variety of dosage forms and potencies. For certain other uses, such as in the suppression of lactation and the checking of functional uterine bleeding, the high activity of orally administered Diethylstilbestrol commends itself. Diethylstilbestrol Squibb likewise is available in a variety of dosage forms. Recent reports[1] suggest that the nausea which frequently accompanies its initial use becomes less serious as patients gain a tolerance to its administration.



[1] *Jl. Clin. Endocrinology* 3:648, Dec. 1943.

For literature write the Professional Service Dept., 745 Fifth Ave., New York 22, N. Y.

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IN THE *Progressive* NUTRITIONAL NEEDS OF GESTATION

While it is not strictly true that the gravid woman must "eat for two," nutritional requirements nevertheless are higher during pregnancy. As the fetus increases in size, its nutritional demands increase. In consequence, food consumption must be progressively raised to prevent catabolic breakdown of maternal tissue to satisfy these needs.

Ovaltine proves of real value as an aid in satisfying the greater nutritional needs during pregnancy. This delicious food drink proves appealing during this period when anorexia may seriously curtail food consumption. It supplies the nutrients especially required for proper fetal growth—minerals, vitamins, and biologically adequate proteins. Prescribed during the second and third trimesters, Ovaltine helps promote a state of optimum nutrition in the mother and optimum development of the fetus.

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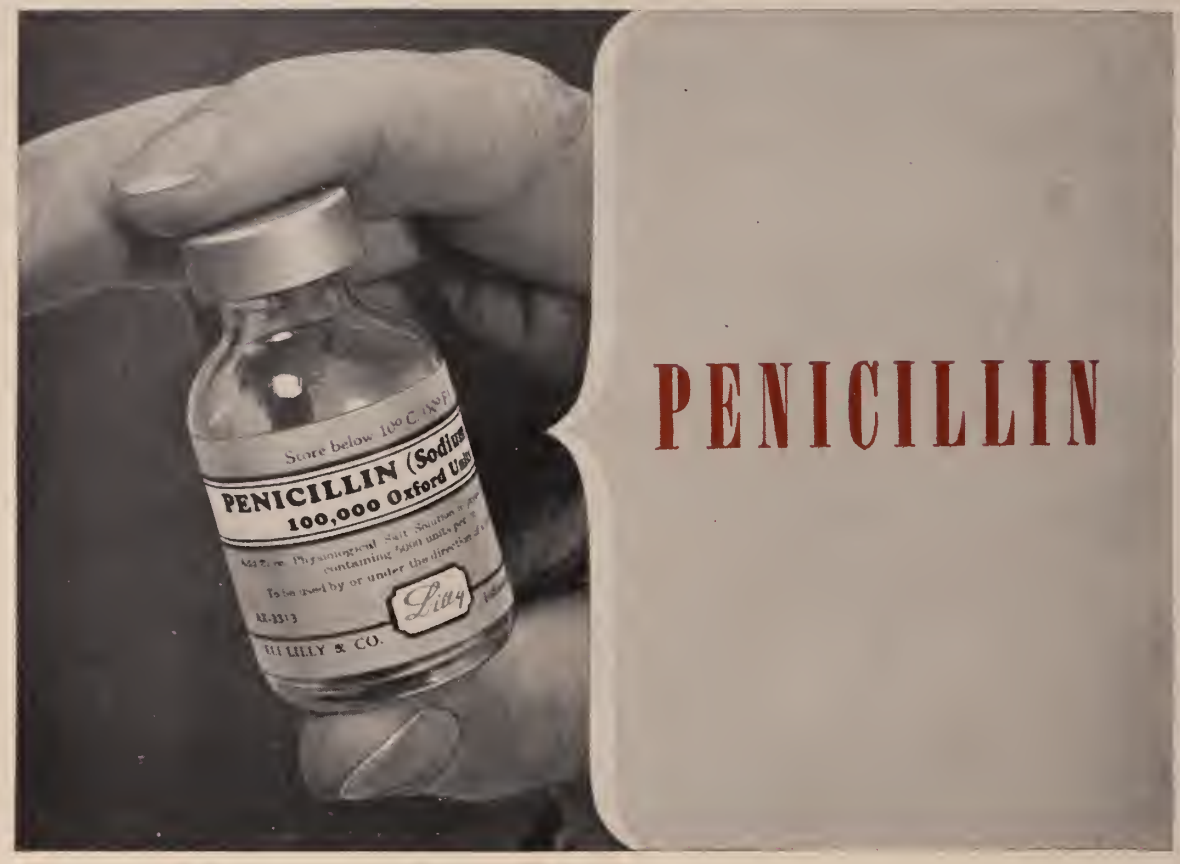


Ovaltine

Three daily servings (1½ oz.) of Ovaltine provide:

	Dry Ovaltine	Ovaltine with milk*		Dry Ovaltine	Ovaltine with milk*
PROTEIN	6.0 Gm.	31.2 Gm.	VITAMIN A	1500 I.U.	2953 I.U.
CARBOHYDRATE	30.0 Gm.	62.43 Gm.	VITAMIN D	405 I.U.	480 I.U.
FAT	2.8 Gm.	29.34 Gm.	THIAMINE	.9 mg.	1.296 mg.
CALCIUM	.25 Gm.	1.104 Gm.	RIBOFLAVIN	.25 mg.	1.278 mg.
PHOSPHORUS	.25 Gm.	.903 Gm.	NIACIN	3.0 mg.	5.0 mg.
IRON	10.5 mg.	11.94 mg.	COPPER	.5 mg.	.5 mg.

*Each serving made with 8 oz. of milk; based on average reported values for milk.



PENICILLIN

★ FROM THE BEGINNING, Eli Lilly and Company has been active in the development of Penicillin, and for several months has made it available to the armed forces on government allocation and to the Office of Scientific Research and Development.

The material has been so scarce that very little has been available for civilian use, and then only on special assignment. Even in army and navy hospitals it often was restricted to patients unresponsive to sulfa-drug treatment.

Penicillin is now more generally available, and research to achieve the ultimate in chemotherapeutic perfection continues as a major project in the Lilly laboratories.

Eli Lilly and Company, Indianapolis 6, Indiana, U.S.A.

Lilly BUY WAR BONDS FOR VICTORY

KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

Published Under the Auspices of the Council

VOL. 42, NO. 6 BOWLING GREEN, KY. JUNE, 1944

THE ANNUAL MEETING

The Annual Meeting of the Kentucky State Medical Association will be held in Lexington, Monday, Tuesday and Wednesday, September 18, 19 and 20. Headquarters will be at the Phoenix Hotel. Monday will be devoted exclusively to meetings of the House of Delegates, which will be held in the Fireside Room, Phoenix Hotel; General Session will begin Tuesday at 9 A. M. and continue through Wednesday. The Registration Booth will be on the Mezzanine floor of the Phoenix Hotel and open throughout the meeting.

The headquarters of the Woman's Auxiliary will be at the Lafayette Hotel where all their meetings will be held.

The Annual Banquet will be held in the Ball Room of the Lafayette Hotel at 6:30 P. M. Tuesday.

It is not too early to make your hotel reservations which are in charge of Dr. C. C. Garr, Lexington. Reservations may be made either through him or through the hotel.

The Scientific Program is again being sponsored jointly by the American Medical Association, American College of Physicians and American College of Surgeons, and will consist largely of war time postgraduate courses.

PENICILLIN

The production of penicillin has now increased to the point where all present military needs are being met, with a limited surplus available for civilian medical use. The production of penicillin is entirely under the War Production Board and, in order to distribute as equitably as possible that available for civilian use, this Board has set up the Office of Civilian Penicillin Distribution, 226 W. Jackson Blvd., Chicago 6, Illinois. The plan of distribution by this Office has been concurred in and approved by its advisory panel which is made up of representatives of the various interested and authoritative agencies of the country.

Since penicillin cannot be administered by mouth but must be administered parenterally or tropically, at fairly frequent intervals over periods varying from one to several days, its administration becomes essentially a hospital procedure. Therefore, the plan of distribution is through hospitals. Various hospitals in Kentucky have been chosen by the Distribution Office to serve as "depot hospitals," not only to obtain sufficient drug to take care of their own needs but to supply other hospitals in their respective vicinities. The "depot hospitals" thus far chosen are: City Hospital, Bowling Green; St. Elizabeth's Hospital, Covington; King's Daughters Hospital, Frankfort; Hazard Hospital, Hazard; Good Samaritan Hospital, St. Joseph's Hospital, Lexington; Kentucky Baptist, Louisville General, Norton Memorial, St. Anthony's, St. Joseph's and S. S. Mary and Elizabeth Hospitals, Louisville; Owensboro-Daviess County Hospital, Owensboro; Riverside Hospital, Paducah; and Pineville Community Hospital, Pineville. More detailed information about the plan of distribution may be obtained by writing directly to the Office of Civilian Penicillin Distribution, Chicago.

Based largely on studies made by the Committee on Chemotherapeutic and Other Agents, Division of Medical Sciences, National Research Council, under the Chairmanship of Chester S. Keefer, M. D., penicillin has been found to be the best therapeutic agent available for the treatment of such conditions as:

1. All staphylococcic infections with and without bacteremia, such as acute osteomyelitis, carbuncles, meningitis, cavernous or lateral sinus thrombosis, pneumonia, empyema, abscess of the kidney, and all wound infections.

2. All clostridia infections, such as gas gangrene, and malignant edema.

3. All hemolytic streptococcic infections with bacteremia and all serious local infections, such as cellutitis, and mastoiditis with intra-cranial complications such as meningitis and lateral sinus thrombosis; pneumonia and empyema; puerperal sepsis and peritonitis.

4. All pneumococcic infections, such as meningitis, pleurisy, endocarditis or pneumonia.

5. All gonococcic infections, including arthritis, ophthalmia, endocarditis, peritonitis, epididymitis, endocervicitis and urethritis.

Penicillin has also been found to be effective in the treatment of the following diseases though its ability to effect a final cure has not been definitely defined: Syphilis, actinomycosis and bacterial endocarditis. It is of questionable value in ruptured appendix, liver abscesses, urinary tract infections and ratbite fever due to strepto-bacillus moniliformis.

Many reports by qualified observers have appeared in various publications on the value of penicillin in many infections. In most of the conditions in which it has been found effective, existing evidence indicates that it is more effective than any hitherto known therapeutic agents. Following are references to a few of the recent reports from which valuable practical information can be obtained on its indications, contra-indications, effectiveness, dosage and methods of administration:

Keefer, Chester S., et al., Penicillin in the Treatment of Infections, J. A. M. A., 122: 1217, (Aug. 28), 1943; Richards, A. N., Penicillin, J. A. M. A., 122: 235, (May 22), 1943; Dawson, M. H., Hobby, Gladys L., The Clinical Use of Penicillin, J. A. M. A., 124: 611, (Mch. 4), 1944; Harold, Wallace E., Clinical Use of Penicillin, J. A. M. A., 124: 622, (Mch. 4), 1944; Bloomfield, A. L., Rantz, L. A., Kirby, W. M., The Clinical Use of Penicillin, J. A. M. A., 124: 627, (Mch. 4), 1944; Lyons, Champ, Penicillin Therapy of Surgical Infections in the U. S. Army, 123: 1007, (Dec. 18), 1943. Office of Civilian Penicillin Distribution, The Indications, Contra-indications, Mode of Administration and Dosage for Penicillin, Schedule F, (May 1), 1944.

The War Production Board is to be commended on its efforts to distribute so equitably such a valuable therapeutic agent. There is little question that the task will be large and troublesome, but the dividends will be great in terms of lives saved.

CURRENT COMMENTS

The National Naval Medical Center of Bethesda, Maryland, is endeavoring to collect for its archives a complete set of commissions issued to Naval medical officers, and signed by past Presidents of the United States.

There is a small nidus now at the Center and it is hoped to be able to build this up to completion. Through the Navy Department Library and the National Archives a few more have been located.

The National Naval Medical Center desires that this be called to the attention of physicians in the State in the hope that any individual physician who may have in his possession an old Naval commission would be willing to present it to the Center for preservation and exhibit. It is felt that there could be no more fitting enshrinement for such commissions. Any physician in Kentucky who would care to present his Naval commission to the National Naval Medical Center should address Dr. Robert C. Ransdell, Commander, (MC), USNR, Division of Publications, Bureau of Medicine and Surgery, Navy Department, Washington 25, D. C.

Dr. Virgil Earl Simpson, Chairman of the Committee on Medical Economics of the Jefferson County Medical Society and Chairman of the Medical Economics Committee of the Kentucky State Medical Association, suddenly collapsed and expired May 3, 1944 at 9:00 P. M., at a meeting of the First District Nurses Association, in the Henry Clay Hotel, Louisville, just after having closed an address on the Wagner-Murray-Dingell Bill. His death in this dramatic fashion shocked his colleagues, his many personal friends, his large clientele and the community at large. An appropriate obituary will appear in a later issue of the Journal.

The War Department Emblem of Civilian Service in recognition for six months' duty on the examining board at the Louisville Armory induction station was received by the following doctors: G. F. Haig, Bloomfield, Indiana; A. M. Lyon, Frankfort; Oral H. McDonald, Shelbyville, Indiana; John G. Clem, John Moren, James R. Peabody, Charles F. Wood, George P. Buetel, J. Garland Sherrill and Carl A. Whitaker, Louisville.

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Mitchell, Lieut. Eugene P., Louisville
Mitzlaff, Capt. Louis O., Louisville
Moberly, Capt. Fred P., Lexington
Monroe, Maj. Robert F., Louisville
Moody, Capt. Henry H., Cynthiana
Moore, Capt. Escum L., Lexington
Moore, Lieut. Frank H.. Bowling Green
Moore, Lieut. James E., Ashland
Moore, Lieut. L. P., Greenville
Moore, Lieut. Roy H., Louisville
Mooreman, Capt. Chapman S., Louisville
Morgan, Maj. Wm. S., Jr., Paris
Mullen, Maj. Alvin B., Louisville
Murray, Capt. Hershell B., West Liberty
Myers, Maj. Ernest E., Lexington
Nagel, Capt. Louis, Louisville
Neill, Lieut. James Moreman, Valley Station
Newman, Lt. Comdr. John S., Hebbardsville
Nichols, Lieut. W. E., Manchester
Noel, Maj. Philip J., Bowling Green
Nutter, Lieut. Wyndham H., Pine Mountain
Ogden, Capt. Owen S., Louisville
Oldham, Lieut. Wm. J., Owensboro
Olinger, Lieut. Wm. Ashley, Louisville
Orr, Maj. Robert A., Mayfield
Osburn, Lieut. Robert P., Louisville
Overstreet, Lieut. Ralph M., Louisville
Overstreet, Comdr. Sam A., Louisville
Palmer, Lt. Col. Lee, Louisville
Paris, Lieut. Samuel E., Brownsville
Parker, Capt. H. N., Maysville
Parks, Lt. Comdr. S. S., Lexington
Parr, Lieut. Luther H., Ashland
Pauli, Lt. Comdr. Augustus J., Louisville
Payne, Capt. M. B., Blue Diamond
Payton, Maj. Leland E., Lynch
Pearlman, Lt. Comdr. Reuben C. Louisville
Pennington, Maj. W. H., Lexington
Peters, Lt. Comdr. John R., Louisville
Peterson, Lieut. Gilman P., Cave City
Petro, Lieut. George J., Louisville
Pfingst, Maj. Harry A., Louisville
Phillips, Capt. Irwin E., Worley
Phillips, Capt. Thomas L., Louisville
Pierce, Maj. W. V., Covington
Pigman, Capt. Carl, Whitesburg
Pigmon, Capt. A. B., Allock
Pittinger, Capt. Byron N., Paris
Porter, Lieut. Charles B., Lexington
Poweleit, Capt. Alvin C., Newport
Powell, Lieut. Frank M., Jr., Louisville
Prewitt, Lieut. John H., Lexington
Prichard, Capt. Hubert J., Catlettsburg
Prindle, Capt. Clair G., Maysville
Pryor, Lieut. George Edgar, Hopkinsville
Pryor, Maj. Will R., Louisville
Quaife, Lieut. Clarence E., Jr., Covington
Quill, Maj. Lawrence G., Covington
Quinn, Lieut. Charles S., Louisville
Rankin, Maj. Gen. Fred W., Lexington
Ransdall, Capt. Herbert T., Jr., Shelbyville
Ray, Maj. Edward H., Lexington
Ray, Capt. Joseph M., Hazard
Reichert, Capt. Robert, Covington
Reid, Capt. Ben A., Louisville
Reik, Lieut. Louis, Covington
Reitz, Lieut. John Frank, Newport
Rice, Lieut. John R., Hopkinsville
Rice, Lieut. Robert L., Richmond
Rich, Maj. Murray L., Covington
Richey, Lt. Comdr. Harper E., Louisville
Rickman, Capt. Samuel M., Paris
Riffe, Lt. Comdr. John C., Covington
Riggs, Lieut. Robert C., Lexington
Robbins, Capt. Ballard F., Berea
Robbins, Capt. James S., Mayfield
Robertson, Capt. R. W., Paducah
Rolf, Capt. John J., Ft. Mitchell
Rollings, Capt. Rae P., Louisville
Rompf, Capt. John H., Lexington
Rosenbaum, Capt. Irving, Jr., Louisville
Rosenberg, Capt. Theo., Paducah
Rosenblatt, Lieut. William H., Louisville
Roser, Maj. Charles L., Jr., Louisville
Royalty, Lieut. Daley M., Harrodsburg
Rulander, Lieut, Fred W., Louisville
Russell, Lt. Col. Blanton E., Clinton
Rust, Capt. Richard J., Newport
Rutledge, Lieut. Chas. C., Richmond
Saam, Capt. Henry G., Louisville
Sanders, Capt. R. Douglas, Louisville
Salmon, Maj. David L., Madisonville
Salmon, Col. James L., Closplint
Savage, Lieut. W. Mountjoy, Maysville
Schickel, Lieut. Joseph, Burkesville
Schlinger, Lieut. George A., Louisville
Schneider, Maj. Bernard, Louisville
Schultz, Capt. Arthur F., Bellevue
Schultze, Capt. Joseph H., Covington
Schumann, Lieut. George N., Louisville
Schwegman, Capt. Marcellus J., Ft. Thomas
Scott, Capt. Frederick A., Madisonville
Scott, Lt. Thornton, Lexington
Seay, Capt. Horace H., Louisville

Sewell, Lt. Col. Frank K., Jackson
Shacklette, Lt. Comdr. Cripps B., Shively
Shafer, Lt. Comdr. A. A., Louisville
Shaw, Capt. Houston W., Louisville
Shiflett, Maj. Emory L., Louisville
Shifley, Lieut. Glenn M., Barbourville
Sloan, Capt. A. D., Paintsville
Slucher, Comdr. Richard R., Beuchel
Smiser, Lieut. Harmon T., Cynthiana
Smith, Lieut. Darwin E., Lynch
Smith, Maj. Keith P., Corbin
Smith, Lieut. Tom J., Covington
Snider, Lieut. Dixie E., Louisville
Solomon, Capt. Edwin P., Louisville
Sonne, Lt. Col. Irvin H., Fort Thomas
Sparks, Lt. Comdr. Clyde C., Cromona
Sparks, Lieut. O. D., Van Lear
Speevack, Capt. Maher, Munfordville
Spendlove, Lieut. Ray E., Louisville
Spradlin, Lieut. Carroll, Louisville
Spurling, Col. R. Glenn, Louisville
Stacy, Maj. Adam, Jr., Pineville
Starr, Maj. Silas H., Louisville
Stephens, Capt. Wilson P., Fort Thomas
Stevenson, Capt. Richard V., Lexington
Stites, Comdr. James R., Louisville
Stites, Maj. John, Louisville
Stone, Capt. Harry J., Ashland
Stratman, Capt. Edward J., Newport
Strode, Lieut. Ernest C., Louisville
Strode, Lieut. Robert E., Winchester
Strother, Lieut. R. B., Grayson
Sublette, Maj. D. V., Lexington
Sugarman, Capt. Benjamin E., Williamstown
Swann, Lieut. Layson B., Paducah
Thompson, Lt. Col. Malcomb D., Louisville
Thompson, Capt. Morris H., Louisville
Thompson, Lt. Col. William R., Lexington
Threlkeld, Capt. Frank H., Louisville
Thurman, Lieut. David H., Louisville
Toomey, Lt. Comdr. Lawrence O., Bowling Green
Townes, Lt. Col. C. Dwight, Louisville
Townsend, Capt. William M., Falmouth
Tracy, Capt. Edward, Louisville
Traub, Capt. David S., Louisville
Trinca, Capt. Peter J., Fulton
Troutman, Lt. Col. W. B., Louisville
Twyman, Capt. Wilbert M., Louisville
Tyler, Maj. Wm. Lee, Jr., Owensboro
Van Arsdall, Capt. C. B., Jr., Harrodsburg
Venable, Maj. Harry W., Louisville
Vesper, Capt. J. Albert, Jr., Newport
Viers, Maj. Everett R., Ashland
Wahle, Lieut. L. A., Somerset
Wald, Lieut. Herbert, Louisville
Walker, Lieut. J. C., Packard
Walsh, Capt. John T., LaGrange
Walsh, Lieut. Maurice R., Covington
Warfield, Capt. Robert B., Lexington
Washburn, Capt. Burton A., Paducah
Weaver, Capt. Raymond H., Ft. Thomas
Webb, Lieut. Richard B., McRoberts
Weber, Lieut. Melvin J., Ludlow
Weems, Capt. Mallory P., Auxier
Welch, Capt. Ernest A., Lexington
Wells, Maj. G. M., Bowling Green
Wells, Capt. Henry G., Georgetown
Wells, Capt. William C., Glasgow
Welte, Capt. Fred H., Newport
Wheeler, Capt. Carl L., Jr., Lexington
Wheeler, Capt. Owen M., Louisville
White, Capt. Edgar C., Louisville
Wier, Lt. Col. James A., Louisville
Wilhelmus, Lieut. Charles K., Louisville
Willey, Lieut. Francis D., Jenkins
Williams, Lieut. Frederick M., Louisville
Williams, Lieut. James Sanky, Louisville
Williams, Capt. S. Earl, Lexington
Williams, Capt. Walter F., Ashland
Wilkinson, Lieut. Roger L., Louisville
Wilson, Maj. Foster M., Greenville
Wilt, Maj. Frederick W., Georgetown
Wolfe, Capt. Wm. C., Louisville
Woodard, Lieut. Robert Lee, Jr., Louisville
Woods, Lieut. Clifford C., Ashland
Work, Maj. Charles E., Fort Thomas
Wray, Lieut. Loyal C., Jenkins
Wright, Capt. Earl P., Pikeville
Wright, Lieut. Kenneth W., Berea
York, Maj. Paul S., Glasgow
Zeier, Lieut. Francis G., Jamestown
Zimmerman, Capt. Leo. W., Louisville

SPECIAL NOTICE

The rank of the doctors in World War No. II in the Honor Roll was secured from the Secretaries of the County Societies, the draft boards, personal letters from doctors, men in service, their friends and newspaper clippings. Since doubtless there are many changes and promotions since this data was compiled, any reader of the Journal who knows of any corrections to be made, or any change of address, please notify your Secretary. Some of the addresses were uncertain but we used their last address before entering the service.

Additions to the Honor Roll and change in rank will be published from time to time.

ORIGINAL ARTICLES

THROMBOPHLEBITIS AND PULMONARY EMBOLISM

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Sudden death from pulmonary embolism is the greatest tragedy that can happen in the treatment of a patient recovering from an illness or an operation. Thrombophlebitis has been a well understood disease for many generations. Why one individual would develop a thrombophlebitis and get through it successfully without a catastrophe and another would die at a time when he was just about ready to leave the hospital was something that for years was considered an act of God over which the physician had very little control. It has been known for a long while that many of the minor pulmonary complications following illness, particularly following surgery, were due to parts of the thrombus from the veins of the legs breaking off and lodging in the lung. Only in recent years have we fully appreciated the significance of these so-called attacks of pleurisy. We have also called them pneumonia or pneumonitis, and every other name that might apply to sudden pain in the chest. It has become increasingly more impressive that these infarcts to the lung are significant of difficulty in the veins of the legs and the possibility of correcting this complication has become apparent.

About ten years ago, Dr. John Homans of Boston presented a paper before the New England Surgical Society on the radical treatment of thrombophlebitis for the prevention of fatal pulmonary embolism. He reported the case histories of four individuals who had had repeated infarcts and on whom he had ligated the femoral vein with the cessation of infarcts. He believed that he had removed a definite hazard to the patient's life, and certainly had eliminated a source of repeated episodes of uncomfortable illness.

At one time in the study of thrombosis and embolism, we had a feeling that perhaps we could predict which patient might develop a fatal embolus and which one might have a sublethal embolus. Also, we felt that once a patient recovered from a sublethal embolus his chance of developing a fatal one was not very great. In a study of these cases, however, it was obvious to us that this was not true but that a great many individuals did have small infarcts, or even a large infarct, that was not fatal, only to be followed a few days later by a massive embolus producing death.

Attack on the embolus after it reached the pulmonary artery was tried by Norwegian surgeons particularly, and Nystrom from that country reported two successful pulmonary embolectomies before the American Surgical Association some ten or twelve years ago. His method of removing the thrombus from the pulmonary artery as an emergency procedure was used in various clinics in this country and I think in no instance was there a successful outcome. After Nystrom returned to Norway, I was informed later that, in many further attempts, he had not succeeded in saving the patient's life.

One can appreciate the difficulty in removing the thrombus from the pulmonary artery in a sufficiently short period of time so that the brain could make a complete recovery from anoxia. Also, we were perturbed about the fact that in some of these massive emboli, people did not die although they almost succumbed, only to finally recover. Therefore, attempts to remove the embolus after it has reached the pulmonary artery has, I believe, been generally discarded.

After Homans' paper, there was widespread interest in the subject. It was found that this operation of interrupting the main source of the embolus in the leg had been done before in other countries and it had been sporadically done here. We began to feel our way along with this problem and were stimulated by our pathological and roentgenological departments to pursue the studies further. Castleman, working in Mallory's department in pathology, found in a series of autopsies that ninety-five per cent of all fatal pulmonary emboli arose in the deep veins of the leg; the other five per cent arose in the heart.

Hampton in the X-ray department soon found a typical pattern for infarct that was easily recognized. Then we began to study routinely the legs of our patients, particularly postoperative ones, and when we could find clinical evidence of thrombosis, particularly if it was a bland thrombosis without elevation of temperature, we could interrupt this vein often before an infarct took place, and thus definitely reduce morbidity and possibly protect that patient from fatal embolism.

Read before the Kentucky State Medical Association, Louisville, October 4, 5, 6, 1943.

We were cautiously feeling our way along in this direction and following these cases very carefully to see what happened to them, when all of a sudden the medical department became very much interested in the subject. Now we are faced with the problem in our hospital which is rather atypical. The medical department do not ask us to see a patient in consultation and give our opinion as to whether we feel that this patient should have the deep veins of the leg interrupted but their consultation usually reads: "Will you please transfer and ligate the femoral veins of this patient." Their reason for this attitude is understandable when we stop to realize that we cannot always be sure whether the source of the embolus is from the heart or from the leg veins. The preponderance of emboli from the legs is so great and the harm from ligation of these veins under local anesthesia is so slight that they now feel that it should be a procedure that is done routinely in the presence of infarct or in the presence of any signs of thrombophlebitis.

We thought perhaps we might analyze our experience in such a way that possibly we could avoid unnecessary ligations and help decide what patients would likely get well without ligation and whether we could pick up the signs that indicated the need of vein interruption prior to the time of infarct.

Up to January 1, 1943, we had operated on 202 patients for interruption of the femoral veins, in our hospital. The operation is now standardized. The incision is made just below the groin under local anesthesia parallel to the pulsating femoral artery. The vein is easily exposed. The profunda femoris is identified, and we plan to make our interruption just distal to that vessel. By passing a strand of catgut under the vein immediately distal to the profunda and then another one farther down, we have about one centimeter of the superficial femoral vein on which to work which is free of branches. By lifting up on these catgut loops we can prevent thrombi from passing from below upwards during the manipulation.

The vein is opened transversely through half its diameter and the clot begins to extrude itself somewhat and that portion of the clot is removed by the forceps. The Trendelenburg sucker, devised for use in embolectomy from the pulmonary artery, has since been replaced by an ordinary bent glass drinking tube which is more simple and just as effective. With suction attached to the tube, it fixes itself onto the clot first in the proximal segment. It can be withdrawn without any fear at all of dislodging the clot during the manipulation. After the proximal clot is removed and free bleeding obtained, the proximal ligature is tied and then the distal segment of vein is freed of as much clot as possible. The more adequate the clot extraction is, the less postoperative swelling results. The vein is completely divided and stitch ligatures are applied through the vein ends distal to the previous ties. The wound is then flushed with normal salt solution and closed without drainage.

The etiology of thromboses in these cases, that have had operation and that have been diagnosed as veins containing thrombi, is as follows: Those associated with acute infections 5; those that occured without any cause that we could determine whatever, 64; post-traumatic 22; and postoperative 113.

The types of previous surgical procedures were varied, but abdominal operations, as we expected, head the list. We rather thought that the genito-urinary service would have a higher proportion than they did because they previously had the largest incidence of fatal emboli of any of the surgical departments. Recently, they began getting their patients out of bed the day after operation. Since then they have had a very excellent record.

In 1937, we did vein interruption on one patient; in 1938 on none; in 1939 on eight; in 1940 on five; in 1941 on fifty-five; and in 1942 one hundred and thirty-three. Since that time, there probably has been about the same ratio as in 1942, 280 femoral veins in 202 patients had been interrupted up to January 1, 1943.

The symptomatology is as follows: Those with pain in the chest as the first symptom, 41 per cent; the number of cases with leg signs as the first symptom, 59 per cent; the number of extremities showing swelling 159 cases; the number of extremities showing tenderness, 143 cases; and the number of extremities showing positive Homans' sign, 59 cases.

Homans describes this sign as follows: With the patient's leg extended, one hand rests gently on the knee, the other hand dorsiflexes the foot forcibly but gradually. This will produce pain or discomfort in the region of the gastrocnemius or the popliteal space in a large number of cases. If there is a positive Homans' sign on dorsiflexion, we can be sure that that

vein has a thrombus or has had a thrombus in it.

I wish to mention the age of the patients particularly for the benefit of the military officers, because it is obvious that in the group of patients which they see, embolus of a serious nature is not so apt to take place as in the older age group. Eighty-one per cent of our cases were in patients over forty years of age.

The wedge-shaped appearance of infarct as shown in the typical roentgenogram cannot be mistaken for anything else. One knows that the source of this infarct is from a leg vein in 90 per cent of the cases. Whether there are any symptoms or not, one knows that this is an infarct and one might protect this patient from a fatal embolus by immediate treatment.

Klopstock, working in Dr. Churchill's laboratory at the Massachusetts General Hospital, prophesied that we would find most of our infarcts in the left lower lobe, and 69.5 per cent proved to be there. This is due to the anatomical arrangement of the veins.

We found that a great many of our patients, who had infarcts and had their veins ligated, gave a typical picture: an elevation in respiratory rate as well as in pulse and in temperature. When one notes on the chart that these three peaks, however slight, have occurred together, the evidence of thrombosis is very strong. The temperature, pulse, and respiration returned to normal in an average of 4.5 days after the femoral veins were interrupted.

Some of these patients had more postoperative edema than others and we tried to find out whether it was due to the ligation above or below the profunda. Those ligated above the profunda did have, on the whole, a longer period of postoperative swelling than those ligated below this vessel. Therefore, we feel that the superficial femoral rather than the common femoral should be divided. The amount of pre-operative swelling and the duration of the thrombophlebitis, as well as the ability to remove the clots adequately, all played a role in the degree and the duration of postoperative oedema. Postoperative swelling usually disappears in 4 to 8 weeks, occasionally it lasts a year. It is not troublesome and we have seen none of the postphlebitic ulcer and eczema common after spontaneous recovery from thrombophlebitis.

We found the left femoral vein was involved in 150 cases as against 130 on the right side. We expected a greater discrepancy on anatomical grounds. There were 124 unilateral operations and 78 bilateral operations in this group of cases, and the future figures from our hospital will show a much higher incidence of bilateral operations because we have so often had the experience of ligating one side and then a week later having to do the other side. Also, we have had the experience of having ligated the side that was obviously involved, with apparently a normal vein in the opposite leg, only to find that another infarct came along, and in a supposedly normal vein a clot was removed. There is a bland type of thrombosis, or, as Ochsner calls it, a phlebothrombosis that does not manifest itself by the usual signs of swelling, pain, temperature, and so forth. This type of thrombus is the likely one to break away. Therefore, we must be doubly alert for minor signs and symptoms.

We endeavored to ascertain how many thrombi we removed at the time of the vein interruption and how many thrombi had already got loose and gone off into the lung and how many were still below the level of the operation. Actually, the thrombi found at operation were thirty, and not found in fifty-four instances in patients who had already had infarcts. In patients who had not had infarcts, fifty-six were found at operation and sixty-two were not found. In other words, there is a definite increase in the percentage of thrombi found in those who had not had infarcts, showing that we did actually get at the clot in many instances before infarct occurred.

We went through the usual period of feeling that perhaps we ought to have a more accurate method of making the diagnosis of trouble in the vein, so we adopted Braun's method of doing phlebograms by injecting a radiopaque solution into the veins and having x-ray films made. It became popular for a while and now has been practically discarded because we found that we could not rely upon it. Not only is it difficult to get this test made under War conditions, with the x-ray department overworked, but in our opinion it is not of sufficient value to warrant it. We feel that one ought to be able to determine whether or not the vein should be interrupted without the use of the phlebograms. We found a lot of clots in the veins of patients with supposedly negative phlebograms and a lot of clots were not found in the veins of patients

with supposedly positive phlebograms. Therefore, this procedure is pretty well in the discard as far as we are concerned. In 1941, 69 per cent of the patients had phlebograms; in 1942, 50 per cent had them. I would estimate that in 1943, less than 10 per cent have had them.

Cardiac patients are sent over to the surgical department to have this operation done after they have had a pulmonary infarct. The cardiologists know full well that the chance of the infarct coming from the heart is very good, rather than from the leg. However, in a certain number of these patients that have been operated upon, we have found thrombi in the leg veins and we believe that we have aided in the recovery of some of these individuals. After an infarct, the medical department would like to be free of any responsibility of further trouble from leg veins.

If one can accomplish nothing else in thrombophlebitis except to save the prolonged convalescence that had been the custom in the East in the palliative treatment of these patients, the effort would be worth-while. The average period of bed rest for patients with thrombophlebitis in our clinic was six weeks. We found that the average number of days between vein interruption and a normal chart was 4.5. We found that the postoperative number of days in the hospital averaged 8.4. So you see that this method of treatment makes it possible for the patient to become ambulatory very much more quickly and allows him to leave the hospital much earlier. As a matter of fact, we do not hesitate to get these patients out of bed the day following vein interruption provided other conditions are satisfactory. We do not necessarily wait until they have a normal temperature before making them ambulatory.

Everyone wants to know how much these legs swell after vein interruption. There is a considerable amount of postoperative edema when these patients get up. They wear woven bandages on their legs from their feet up to the tibial tubercle, sometimes for a period of three months while they are up and about. The majority of them, however, discard these bandages long before that time has elapsed. They have a little transitory swelling toward the end of the day, which all goes away through the night, and by and by even this swelling ceases.

It has been interesting to me to find that the thicker the vein, the more adherent the clot; and the larger the leg before you operate on it, the more swelling there will be afterwards. The more normal the vein, the earlier you recognize the need for interrupting it; and the smaller the clot found, the less swelling you will see afterwards. This swelling in no instance has been disabling. These patients have been able to go about their usual occupations as quickly as if they had not had the complication of thrombophlebitis. I do not mean that these people would not have had prolonged swelling, perhaps permanent swelling, had they not had their veins interrupted. We do not see long-standing edema following this operation like we saw following the palliative type of treatment of thrombophlebitis.

There were twelve patients out of 202 that died in the hospital, and we naturally wanted to see whether the operation on their veins had any bearing whatever on their death. We expected that we might find some evidence that this had not always been an innocent procedure. It is true, however, that in these 202 patients there was not a single fatality that occurred as a result of this venous interruption. Every single one of these twelve patients that died, died from other causes. There was no evidence whatever that the venous interruption played any part in their death.

We expected that we would get an occasional fatal embolus from thrombosis in the veins above the point of interruption and much to our surprise this has not occurred. I suppose the reason is that we take off the main source of embolus in this long channel, the femoral vein, and by dividing it, there is no force on the remaining clot that might be left, or if a clot should redevelop proximal to this region and should break off, it will not be large enough to produce a fatal embolism. Ten per cent of the people that have had venous ligations in this group had minor infarcts afterwards, but not one single instance of fatal pulmonary embolus occurred in this group.

I do not mean to say that we have not

had a case of fatal pulmonary embolus in our hospital since we have been doing this operation. As a matter of fact, we have had four or five fatal emboli occurring in patients that did not give us the slightest warning that they had anything the matter with the veins in their legs. Postoperative patients have their legs and charts inspected twice a day by the resident staff. All kinds of prophylactic measures are carried out in order to try to pick up these thrombophlebitic veins and detect the thrombi early. In spite of these precautions, four or five patients have died in our hospital in a twelve-month period from pulmonary embolus. These gave no warning infarct, gave no sign of a thrombosis in their leg veins. We cannot spot all of them, but we can by this method save the patients with thrombophlebitis long periods of disability, and we can save the patients who give us any warning, the possibility of a fatal embolism.

The following comments were made while a moving picture of bilateral femoral vein interruption for thrombophlebitis was being shown. The picture was made by Dr. Robert Linton of the Massachusetts General Hospital.

It is not always necessary or even desirable to ligate the saphenous vein. I think that if it is thrombosed, one might do well to ligate it, but if it is normal I believe it might better be left alone.

One can never go astray in the location of the femoral vein because the pulsation of the artery is a perfect guide.

Frequently one has to lift the artery off the vein somewhat because at this level the vein lies slightly behind the artery, in some instances more than in others.

Every one of us has feared that the dissection of the femoral vein would dislodge the clot. We may have used up all our luck because we have been constantly alert for this possibility, but so far it has not happened. We have the patient in a slightly sitting position during the operation and I believe that this extra pressure within the abdomen permits the necessary amount of manipulation here without negative pressure in the vena cava. It is very important not to ligate the vein in continuity since a ligature through the thrombus might force the proximal portion of the clot out of the vein and into the circulation.

I do not believe it is necessary to put a temporary guy ligature around the profunda femoris. I think one can leave out this step in the technic without any fear of having a thrombus dislodged.

We divide the vein transversely because we have only a short portion to deal with (approximately ½ inch) and it makes the ligation of the vein at this level easier. An enormous flow of blood after removal of the proximal clot indicates that there cannot be much thrombus left above it.

Having cleared away the smoke after getting the thrombus out of the upper end, one takes as much of the clot as possible out of the lower segment. We find that the convalescence is very much enhanced by this maneuver.

Suction applied through a glass tube brings out any clots that are free. If there is free bleeding from the lower segment of the vein, we feel that that vein is as clear of thrombi as we can get it.

This may seem like a very radical procedure. One wonders how we get on without such a large vein in the leg. Experimental evidence by Homans would indicate that no more than ten per cent of the return flow of blood has to go through the femoral vein. Probably more than that amount does take this route but very soon nature compensates for its loss and, strangely enough, it does not mean by the development of varicose veins. It is the deeper veins that take over the job.

This particular case was not suspected of having any pathology in the opposite vein and, as I recall it, a thrombus was found. That is not the rule, but it does happen fairly frequently.

It is perfectly easy to control the blood flow with the catgut strand underneath the vein.

After ligating and dividing the vein, it is well to transfix it distal to the tie. If you do not, occasionally one of these veins will slip a tie and create an unnecessary hematoma.

It is possible that complete division of the vein also make it less likely for thrombi that may reform in the proximal segment to break off into the venous circulation.

Summary and Conclusions

1. Pulmonary infarcts come from the deep veins of the legs in 95 per cent of the cases.

2. Thrombosis of the leg veins can often be diagnosed prior to pulmonary infarct.

3. Interruption of the superficial femoral veins has been carried out in more than 202 patients in our clinic without serious sequelae.

4. The operation is a simple procedure

that can be done on a very ill patient without risk.

5. Femoral vein interruption prevents fatal pulmonary embolus. It reduces the convalescence period of thrombophlebitis.

6. Postoperative edema of the legs is transient and not disabling. So far, we have seen no evidence of permanent swelling, or the usual sequelae of postphlebitic eczema and ulcer so frequently seen following the conservative methods of treatment of thrombophlebitis.

7. The earlier the diagnosis is made and vein interruption is done, the shorter the period of convalescence.

THE RH FACTOR AND ERYTHROBLASTOSIS FETALIS

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Dr. Levine, in his article on the pathogenesis of Erythroblastosis Fetalis, states that "Erythroblastosis is caused by the isoimmunization of the mother by a dominant hereditary blood factor in the fetus, most frequently the Rh factor." In more than 90% the father's blood contains the Rh factor Rh+, the mother's blood lacks the factor Rh-, while the fetal blood must contain it.

First the Rh- mother produces anti Rh agglutinins. Then these agglutinins continuously pass through the placenta to react with and hemolyse the susceptible Rh+ blood.

The Rh factor also induces isoimmunization by means of repeated blood transfusions. The Rh- patient is immunized by numerous transfusions of Rh+ blood. "The very first transfusion of mothers of infants with erythroblastosis fetalis with Rh+ blood may result in violent hemolytic reactions ending in severe or fatal anuria.

Dr. Levine goes on to state that "In 1940 Landsteiner and Wiener studied the specificity of an immune serum produced in rabbits and guinea pigs by injection with the blood of macacus rhesus. This serum was found to agglutinate 85% of all human bloods. These bloods are termed Rh+ by Landsteiner and Wiener and the 15% inactive Rh-. There was no clinical importance to this discovery until Wiener and Peters showed Rh- individuals may be immunized by repeated transfusions with Rh+ blood and further transfusions with this blood resulted in severe hemolytic reactions. These observations were soon confirmed by several authors.

The high incidence of transfusion reactions in obstetric patients with the first transfusion led to the description of the pathogenesis of Erythroblastosis Fetalis. These patients must have been immunized by the blood factor in the fetal blood, during the course of pregnancy. The mother was then found to be Rh- the agglutinin anti Rh; also the high incidence of neonatal or fetal deaths, miscarriages and stillbirths in this group of transfusion accidents was significant. The cause of these fetal or neonatal deaths in some cases was proved to be erythroblastosis fetalis on the basis of clinical and pathological findings.

There are some Rh+ mothers of infants with erythroblastosis. Another factor, Hr, is responsible in these cases. Some cases are probably the result of anti-A or anti-B agglutinins. This work is still experimental.

The reason for the high incidence of erythroblastosis fetalis in some families and not in others has been found to be due to the genetic constitution of the father's blood. If the father is homozygous, RhRh. the fetus must be Rh+. So every pregnancy offers an opportunity for the immunization of the Rh- mother. If the father is heterozygous RhRh, 50% of the off spring will be Rh-, 50% Rh+. In either mating the first one or two pregnancies with Rh+ fetus may be required to initiate a sufficient degree of isoimmunization. Once the Rh- mother is immunized, all subsequent pregnancies with Rh+ fetuses terminate in one of several clinical varieties of erythroblastosis fetalis. The mildest form is neonatal anemia, the intermediate icterus gravis. the most severe, fetal hydrops and still birth. All have uniform destruction of blood.

Therefore if it is found that one of the children is Rh-, then the father is heterozygous and 50% Rh- can be expected and further pregnancies can be recommended. If the first children are Rh+ then further pregnancies should be discouraged. Four sets of twins were studied in which the normal member was Rh-, the affected Rh+.

Dr. Levine feels that the ideal treatment for erythroblastosis fetalis is transfusion with Rh- blood. This blood must not be the mother's. He mentioned one case where transfusion with the mother's blood was followed by an increase of the jaundice, fever, and hemoglobinuria. His case

Read before the Madison County Medical Society.

was transfused with the mother's blood and the anemia increased. Then a random Rh- donor was used and the anemia improved rapidly. There is no congenital defect in the red cells.

Case Report

The baby, white, M. D., was born Dec. 3rd, 1943 weighing 9 lbs. 13 oz. The delivery was a normal spontaneous one. There were two living siblings. Three days after birth the baby developed jaundice. The baby left the hospital at about seven days.

It was brought to me for the first time at about ten days of age with a chief complaint of severe jaundice and frequent vomiting. No enlargement of liver or spleen was found. Bowel movements were normal in color and amount so a congenital defect of the liver did not seem likely. The vomiting was controlled by frequent small breast feedings. The baby continued to lose weight so we put it on an evaporated milk formula at two weeks. The baby gained weight steadily on the formula.

However at two weeks of age, extreme pallor was noted for the first time. A blood count was made. The Hgb. was 4 gms, red blood cells, 1,119,000. We did not have Dr. Levine's article at the time. The father had an allergic history so we gave 16cc. of maternal blood in the buttocks at once. We also prescribed 10 cc. of ferric ammonium citrate, per day and dextrimaltose with iron. The next day Dr. Fuller and I tried to transfuse the baby but were unable to find a suitable vein.

Since we were unable to transfuse the baby, we decided to take a chance with the father's blood and on the 20th gave 16 cc. of the father's blood in the thighs.

Table 1

Date	R.B.C.	Hgb.	Amount	Donor	Site
12 17-43	1,119,000	4 Gms.	16 cc.	Mother	buttocks
12-20-43	1,250,000	4 Gms.	16 cc.	Father	Thighs
12-28-43	2,080,000	7 Gms.	18 cc.	Mother	buttocks
1- 4-44	1,890,000	———	19 cc.	Mother	buttocks
1-11-44	1,490,000	7 Gms.	19 cc.	Father	thighs
1-17-44	2,510,000	9.5 Gms.	20 cc.	Father	buttocks
1-24-44	2,550,000	———	18 cc.	Father	thighs
2- 3-44	3,820,000	12.5 Gms.	none		
3- 1-44	4,530,000	11.5 Gms.			

As can be seen from Table 1, the red cells increased nearly a million cells and the Hgb. went up 3 Gms. in a week after giving the father's blood. We still had not read the article and were again advised not to use the father's blood, so twice more gave the mother's blood into the buttocks, only to have the red cells decrease in two weeks to 1,490,000. The Hgb. remained stationary, showing that the chief destruction was to the cells. At this time, January 11th 1944, we read Dr. Levine's article. The father, mother and baby were brought in for blood studies. It was found that the father was group 1v, Rh+, the mother was group 11 Rh- and the infant group 11 Rh+. At this time a diagnosis of erythroblastosis fetalis was made.

At this time the baby was weaned and no further maternal blood was used. It should also be stated that as long as the mother's blood was injected, the jaundice continued and the baby had frequent attacks of blood in the stool.

As can be seen from the table, as soon as the father's blood was substituted for the mother's, the baby's cells and hemoglobin both rose rapidly until they reached 3,820,000 Hb. 12.5 gms., at which time we discontinued injecting blood. We then depended on the ferric ammonium citrate, the diet and the baby's own power to build cells. One month later, the baby weighed 11 lbs. and 10 ounces, its red blood cells were 4,530,000, Hgb. 11.5 gms. It appeared healthy and well in every respect. There was no sign of jaundice.

One incidental finding was rather interesting. By mere coincidence the mother's blood was at all times given in the buttocks, the father's each time but one in the thighs. The only time the baby's cells did not increase strikingly after giving the father's blood was the week after the father's blood was given in the buttocks. See Table 1. It is wholely possible to assume that there were sufficient anti-Rh agglutinins laid down in the tissues of the buttocks from the mother's blood to neutralize the father's blood in that site, whereas in the thighs where no mother's blood had been injected, the father's blood was effective in assisting the baby to increase its own cells.

Recently we have gone back and checked the parents of another child who is now eighteen months old, who had a history of jaundice and anemia at birth. In her case, the father was Rh+, the mother Rh-. The mother's blood had never been used for her, but the father's blood and the blood of the housekeeper were used in the buttocks. She improved steadily.

Summary

The clinical significance of this work to the general practitioner is, chiefly, that in cases of anemia and jaundice of the newborn, the mother's blood should not be

used either intravenously or intramuscularly. Although it is preferable when transfusing these infants, to use only Rh- random donors, we have had two cases where Rh+ blood was injected intramuscularly in small amounts. This was sufficient to increase the cells and hemoglobin. The mothers of newborn infants with jaundice and anemia should never be transfused without first testing them for the Rh factor. Wherever possible, both parents and siblings of these infants should be tested for the Rh factor. This will aid in diagnosis, prevent transfusion accidents, and will help in the prognosis of future pregnancies.

I have quoted liberally from an article entitled "The Pathogenesis of Erythroblastosis Fetalis." A review—Philip Levine, M. D., published in the Journal of Pediatrics, December 1943.

(Since writing this article both mothers' bloods have been tested for anti Rh agglutinins by Dr. Levine and found to have them.)

THE RH FACTOR

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The RH factor gets its name from RHesus, rhesus monkey. Monkey erythrocytes carry an antigenic factor, an agglutinogen that 85% of humans possess. Those whose cells carry this factor are called RH positive, those who do not are RH negative. A recent number of the Journal of American Medical Association points out that rarely has a medical discovery been so quickly and so widely accepted.

My interest in the RH factor is both scientific and at the same time very personal. Like fate itself, RH has altered my life in a manner that neither my wife nor I can ever fully realize. Just married, we set out to have a family. Our first child, a girl, arrived. She was normal in every way. Two years later, at full term, a stillborn boy was delivered. It was an hydrops. After another two years, a third arrived, this time a girl, with icterus neonatorum. She promptly died. Then to make matters even worse, our first child, now six, died of typhoid.

I can still remember clearly the advice the obstetrician gave my wife, "You are still young, you must try soon again." Though well-sounding at the time, we have lately learned that that was very bad advice indeed. After a four year interval, my wife again delivered at term a boy, who promptly expired. After this, no advice, good or bad, could induce us to "try again."

We sought an explanation for our bad luck. We blamed everything from flu to fate. In those days before RH, we never knew the answer. So now, years later, it was with no little excitement that we awaited the results of our RH tests. The results: my wife negative, I a strong positive.

Here was the real solution of our tragedy. Though each of these babies presented a different appearance, they were in reality different manifestations of the same disease. We had been seeing symptoms, not the disease itself, erythroblastosis fetalis. Invention could supply no better example. Here in my wife was the typical case history of RH factor.

Not only has the RH factor been blamed for icterus neonatorum, hydrops, and stillborn babies, but also for an undetermined number of abortions, and some of the mysterious reactions which have occurred while using donors who were compatible by the ordinary methods of blood matching.

For the solution of these mysteries, credit must largely be given to three individuals: Landsteiner, Levine, and Wiener. We have learned from them how the RH factor operates, that it is a problem in applied immunology, an antigen-antibody reaction.

For purposes of simplicity, we may divide the blood into two elements, erythrocytes and plasma. Our erythrocytes carry several factors which are determined by the laws of heredity. These factors behave as antigens. The plasma contains another set of factors which behave as antibodies. The factors carried by the red blood cells we term agglutinogens, those carried by the plasma, agglutinins. When the blood of two individuals are mixed agglutinogen which meets its specific agglutinin, if present, produces a demonstrable reaction, agglutination of red blood cells. In some instances red cell hemolysis takes place as well as agglutination.

Erythrocytes may carry the following five sets of agglutinogens:

(1) The major blood groups: A, B, AB, and O (international classification). These factors are responsible for the ordinary transfusion reactions of incompatible blood. Their identification is the basis of blood typing and matching.

Read before the Campbell-Kenton County Medical Society, February 4, 1944.

(2) The minor blood groups, or sub-groups: A_1, A_2, A_3, A_1B, A_2B, A_3B. These factors are weak antigens, play a very small part in transfusion accidents, and are said to assume importance only after repeated transfusions. Normal plasma contains no agglutinin for these factors.

(3) The sub-groups: M, N, and MN. These factors, being poor antigens, play no part in transfusion reactions, but are of practical importance in the determination of paternity.

(4) The sub-groups: X, P, H, E, and others. These are as yet of experimental and academic interest.

(5) The RH factor, of proved importance in transfusion reactions and in erythroblastosis fetalis.

Plasma normally contains agglutinins for the major blood groups, A, B, and AB. It normally contains no agglutinins or lysins for any other of the factors, including RH.

Under two sets of circumstances plasma will develop agglutinins for the RH factor:

(1) Following repeated transfusions of blood from RH positive donors into RH negative recipients, and,

(2) In pregnancies, where the mother is RH negative and the father RH positive.

RH In Transfusion Reactions

In these days of Blood Banks, it is not uncommon for patients to receive several transfusions during an illness. In spite of perfect blood group compatibility as judged by the ordinary typing criteria serious reactions may take place, particularly after the lapse of a few weeks since the last of a series of blood transfusions. Invariably these patients are RH negative, the donors RH positive. The patient receiving by transfusion RH positive cells (antigen) develops in his blood plasma (by iso-immunization) anti RH agglutinins. These antibodies on subsequent transfusions of RH positive blood may produce serious reactions. The fact that some reactions are mild may be explained by the variable titre of the patient's agglutinin on the one hand, and by the quantitative variation of the donor's RH factor on the other. But it must be remembered that the repeated use of weak RH positive donors may produce high titre anti-RH agglutinins in some sensitive RH negative patients.

Putting these phenomena to practical application, the following advice is justified:

(1) When repeated whole blood transfusions are contemplated the RH factor should be determined on both the recipient and the donors.

(2) If the recipient is RH negative, only RH negative donors should be employed.

(3) In doubt, or when urgency or circumstances preclude RH factor tests, plasma should be used since it may be employed regardless of ordinary blood groups or RH factor.

(4) The recipient of repeated blood transfusions should be warned that he is RH negative, and should, if in the military, carry RH negative on his identification tags.

(5) Hospitals and blood banks should either store RH negative blood or have a list of normal RH negative donors available for emergencies.

RH In Pregnancy

In a pregnancy in which the father is RH positive, and the mother RH negative, the fetus will inherit the RH factor in proportion determined by whether the father was himself homozygous or heterozygous. First pregnancies, in such unions, are usually uneventful. Subsequent pregnancies may end disastrously in erythroblastosis, neonatal death, stillbirth, or abortion.

The percentage of such cases has been estimated at about 1 in 1000 pregnancies. That the number is not greater, may be due to several factors:

(1) In only about 15% of marriages will the mother be RH negative, the father RH positive.

(2) There are many one child marriages, so that the RH factor has not had full opportunity to operate.

(3) The RH factor does not operate disastrously in every such pregnancy because iso-immunization is either weak, or does not take place.

(4) Were RH blood tests performed in all stillbirths, neonatal deaths, and abortions, the percentage 1 to 1000, might actually be higher.

Operation of the RH Factor

During the progress of pregnancy, in an RH negative mother in which the fetal red blood cells are RH positive, the antigenic factor, RH, enters the maternal circulation by a mechanism as yet not fully understood. Repeated circulatory accidents in the placental barrier is a reasonable explanation.

In response to this RH antigen, by a process of iso-immunization, the maternal tissues elaborate an anti-RH antibody, behaving as an agglutinin and as an hemoly-

sin. This maternal anti-RH factor, being humoral, not cellular, is resorbed through the placental barrier to enter the fetal circulation. Here it exerts its specific destructive action against the fetal red blood cells.

In the ensuing struggle the fetus may die in utero, it may be born without any visible changes, only to die, or it may be born with the usual manifestations of erythroblastosis, icterus or hydrops. In the struggle to survive the fetus may attempt to compensate for its blood destruction by hypertrophy of the placenta and by hyperplasia of its blood forming tissues. Such an infant is anemic, shows large numbers of erythroblasts in its circulation, and at autopsy presents hemorrhagic phenomena and extra-medullary hemopoesis in the viscera. Because of the hemorrhagic phenomena, vitamin K administered on delivery has had beneficial results. Many of these infants, alive at birth, may be saved by prompt and repeated small transfusions. Of necessity, these transfusions should be from normal RH negative donors.

Based upon a knowledge of a behavior of the RH factor, we are justified in listing the following do's and dont's:

(1) In a union in which there is a story of repeated abortions, stillbirths, or neonatal deaths, RH factor tests should be made upon both parents.

(2) Should an RH negative mother require transfusion in such a situation, she should receive RH negative blood of the same major group. Under no circumstances should she be given blood from an RH positive donor.

(3) In the transfusion of the infant, normal RH negative blood should be used. The mother should in no case be the donor, since her blood contains the destructive anti-RH agglutinin. The father likewise should be rejected as a donor.

(4) RH negative women should avoid mating with RH positive husbands.

(5) RH factor tests would be desirable in every mating.

(6) Because experience has shown that there is a fall in the titre of anti-RH agglutinins with the lapse of time, RH negative mothers should be cautioned against pregnancies in rapid succession, and should be advised to allow five years to elapse in the hope that a pregnancy so spaced may terminate normally.

(7) In anticipation of the delivery of a baby of an RH negative-RH positive union , RH negative blood or an RH negative donor should be available for immediate use.

(8) An RH negative mother should be warned of the dangers of subsequent transfusions, by donors who have not been proved RH negative.

For practical reasons, we must not be too much concerned with the suspected involvement of the major blood groups in the mechanism of erythroblastosis; nor with the observation that there are some additional secondary RH factors. Their exact status will be determined in the days to come.

A knowledge of the operation of the RH factor should be not only an aid in diagnosis, but should make a definite contribution to reducing infant mortality.

TREATMENT OF CARCINOMA OF THE PROSTATE

LYTLE ATHERTON, M. D.

Louisville

Carcinoma of the prostate is not new, in fact it is one of the oldest known diseases in man, the morbidity equals or even outweighs that commonly dreaded in the female (breast and uterus). It is not my purpose to enter into a discussion as to the etiology of this disease nor to present a magic cure but to uphold the traditions of Young, who advocates the early diagnosis and radical removal of the gland, in contrast to those who still believe and practice the so-called palliative transurethral resection and/or castration and hormone therapy.

Various urologists have estimated that carcinoma of the prostate occurs in from 12 to 20% of all cases who present symptoms of prostatism. In a review of my past 100 cases, who were operated upon for prostatism, 29 were malignant and, this number might be increased had the whole gland been removed. To break down this 100 cases into 3 groups according to the surgical procedure, 26 cases were subjected to transurethral resection, 3 of whom, according to the pathological report, were malignant. Eight cases were treated by the transvesical route, 2 of which were malignant and 66 cases were operated by the transperineal route with 25 malignancies. It may be noted that the malignancy ratio's percent is approximately 12% for the transurethral resection; 24% for the suprapubic procedure

Read before the Jefferson County Medical Society, January 3, 1944.

and 39% for the perineal prostatectomy. This can only be explained, the more superficial the procedure the less likely we may be able to remove malignant bearing tissue, while the more radical (i.e. capsule and gland) is the operation, more malignancies will be found.

The etiology of cancer is still unknown but for your enlightenment on a discussion of this subject any good textbook may be consulted. Recently, however, numerous articles have appeared in our best journals on the study of hormone imbalance in both adenomatous hyperplasia and carcinoma of the prostate. The estrogen-androgen imbalance must play a very important part in the production of both glandular hyperplasia and carcinoma. A recent study by Miller and Moore, of St. Louis, has shown that a preponderance of urinary estrogen over androgen (3 to 1) was present in hypertrophy, while the androgen ratio was higher in a case of about the same age who did not have hypertrophy.

It is also known that the promiscuous use of testosterone (androgen) may produce hypertrophy of the male genitals and that castration will retard the growth and development. The use of estrogenic hormones in hyperplasia of the prostate does not seem to bear much fruit, but its use in carcinoma may produce a "magic" softening and regression of the prostate with remarkable improvement in the clinical symptoms. Likewise a simple castration operation may bring about a similar clinical picture.

TABLE I

ADENOCARCINOMA OF THE PROSTATE
32 cases (1942-1943)

Incidence of Symptoms	
Frequency	32
Nocturia	30
Dribbling at end of urination	30
Difficulty in starting stream	29
Stream and force	29
Pain and burning on urination	26
Hematuria	5
Pain in hip or legs	4
Loss of weight and strength	17

Kahle and coworkers of New Orleans made a clinical and pathological study on several patients who were subjected to hormone or castration and hormone therapy and found that while the gland did return to a state in which malignancy could not be suspected, on microscopical study, isolated areas of newly formed acini and tubules enmeshed in a fibrous stroma of varying density and thickness were still present. Be-as-it-may, we are reasonably certain that the shortcut methods are still in the embryonic stage and that carcinoma of the prostate must be dealt with in the "cold-bold" radical procedure.

The symptoms of carcinoma of the prostate (Table I) vary little from those of any other type of prostatism but the physical findings will vary a great deal (Table II) and this can only be elicited by a care-

TABLE II

Incidence of Findings (physical, X-ray and laboratory)

Prostate enlarged with slight firmness, no fixation	16 cases
Prostate enlarged, slightly firm and nodules in either the right or left lobes with no fixation	8 cases
Prostate enlarged, firm and nodular in mid and lateral lobes with fixation	3 cases
Prostate enlarged, soft and smooth	2 cases
Prostate small, scirrhus type	2 cases
Prostate normal size but "stoney" hard	1 case
X-Ray Findings:	
No evidence of bone metastasis	31 cases
Metastasis to pelvic bones and lumbar spine	1 case
Residual Urine:	
Acute retention	9 cases
600 to 900 cc	5 cases
30 to 600 cc	6 cases
No residual	1 case
Not recorded	11 cases
Blood Count and hemoglobin estimation invariably lowered	
Serum acid phosphatase checked on numerous cases none of which showed a material variation from normal	

ful digital examination of the prostate. Every physician should not consider the examination complete without palpating the prostate gland and it is only through this constant practice that one may familiarize himself with the normal and abnormal gland. The presence or absence of residual urine is certainly no criterion for the indication or contra-indication to surgical intervention. The roentgen findings (X-Ray Films) may influence one in making a decision.

The presence of anemia with mild clinical symptoms should lead one to strongly suspect cancer and when in doubt, seek the advice of a consultant.

An analysis of our experience (Table III) consisting of 32 cases during the past 2 years, I believe, is most gratifying. I cannot say that the cases were selected in each particular group, but was influenced either by the patient, his attending physician or some organic ailment not referable to the lower urinary tract. The morbidity and mortality certainly was no greater after the perineal approach than either the suprapubic or transurethral resection but freedom of symptoms for which the patient sought relief was obtained in most instances. Of the perineal prostatectomies, 2 previously had had transvesical enucleation, 12 to 18 months respectively, without complete relief, and when first seen, the gland in both instances was enlarged, firm and fixed. Both patients are free of symptoms and in good health 9 and 13 months, except in 1 case, who had a goodly portion of the bladder neck resected, a clamp is worn to control the urine.

Hospital deaths: one, a suprapubic prostatectomy, from shock and the other a perineal prostatectomy, from a heart attack. Three deaths have occurred within 6 months among the remaining 30 patients who survived surgery; one, a cardiorenal uremia; one pneumonia; one coronary occlusion. Twenty-six of the 32

TABLE III

ADENOCARCINOMA OF THE PROSTATE, 32 Cases. (1942-43)

Age	No. Cases	Treatment - Cases: Hormone	Resec'n Trans.	Vesical Trans.	Perineal Trans.	Hormone and Castration	Grade of Tumor	DEATHS: Hosp.	1 Yr.	RESULTS
Under 50	1 age 32	1				Hormone	?	0	0	6 months Symptoms free
50-50	3			1	2	1 - Cast. 1 - Cast. and Hor.	IV ?	0	0	1 died 16 months P. O. 2 living and well 5 and 9 months
60-70	11	1	1		9	9	?	0	1	1 died 6 mos. - cardiorenal 10 living and well 6-18-mos.
70-80	13	5		1	12	5	early and II	2	3	1 Suprapubic shock - death 1 Heart death 48hr. 8 Living 3-22 mos. (a) Footnote
80-90	4	1	2		2	1	early and II	0	0	(b) See footnote

(a) 1—patient perineal prostatectomy—perineal fistula healed has not gained control.
1—patient perineal prostatectomy and orchidectomy (suprapubic prostatectomy 18 months previously) wears clamp otherwise good health.

(b) 1—resection (transurethral) is symptom free, good control (6 mos.) although had catheter drainage for one year prior to operation.
1—resection and castration (4 mos.) still has pain, burning and frequency.
1—perineal prostatectomy (age 85) symptom free 22 months, fair control.
1—perineal prostatectomy (age 82) (6 mos.) fair control.

patients are living and in improved health. All are symptom free with good control, except 3: one, age 74, uses clamp; two age 82 and 85 respectively, only have fair control, with little likelihood of improvement due to advanced age.

Suffice to say, the author is convinced that perineal prostatectomy is the only operation for carcinoma of the prostate or in those cases where malignancy may be suspected. The technical procedure will not be discussed except to say that the gland together with its capsule, seminal vesicles and that portion of the bladder neck which may show evidence of involvement is completely removed and the vesicle neck approximated to the membranous urethra at the urogenital diaphragm after the method of Lowsley.

Those cases whose malignancy is grade 3 or 4 are subjected to an orchidectomy, either the radical which includes the epididymis, or the modified Hess method. The grades 1 and 2 may be treated by orchidectomy or stilbestrol. All cases of carcinoma of the prostate in which radical surgery has been carried out, whether orchidectomy has been performed or not, may be supplemented with hormone treatment should the occasion demand. In carcinoma of the prostate with bone metastasis orchidectomy and hormone therapy may be used alone, unless there is obstruction and the patient is unable to void, in which case transurethral resection may be carried out only as a palliative measure.

In conclusion: (1) After reviewing the results obtained in this series of cases, even though the period of time elapsed is too short to form a definite opinion as to a cure, the clinical improvement has been entirely satisfactory; (2) radical perineal prostatectomy definitely offers a hope for complete relief of symptoms from which the patient complained and a good chance for a cure; (3) suprapubic prostatectomy and transurethral resection offer no hope for a cure, are not conducive to good sound surgical reasoning or ethical practice, and, except for palliative purposes, should not be used.

DISCUSSION

R. A. Bate: I think this excellent paper of Dr. Atherton's is one that should arouse a great deal of discussion. It has been the custom in theological seminaries to have a Chair for "harmonizing the gospels" (comparative religion). I was very much impressed as some things developed, that we really need a Chair to "harmonize the hormones," so that they will be so coordinated there will be no question about their use. I was delighted to hear Dr. Atherton make the application.

There is a point on the surgical side that I might emphasize. In those cases where there has been some irritant preceding prostatic trouble, inducing fibrotic changes, probably surgery is indicated because the colloid tissue is less apt to respond late in those cases which result from deficiency of hormones.

In the beginning, in the Wolffian bodies, as late as the fourth month, it may not be determined whether it is to be testicle or ovary, that period in which the gonad is developing. In the third month of the fetus, prostatic fibers are recognized so that it is difficult to see how that physical condition exists. Nevertheless, it seems to be a fact. Now then, as brought out by the essayist, the anterior pituitary stimulates estrogenic function. The uterus and the prostate are comparatively related. Enlargement would be more apt to occur in abnormal cases. Castration is known to cause cessation of all the testicular functions and the atrophy of the prostate. Following that, the hormones of normality should be used as an adjunct.

In carcinoma of the prostate, the application of the thymus seems to be of even greater effect than the application of the hormones restraining the anterior pituitary effect. In the thymus which, of course lasts in the individual up to puberty, then cessation of its activity begins. In those cases where there is a persistent thymus up to twenty or more, we have the eunuchoid type, with the failure of development of these organs of generation, so that the effect of the thymus on the constitution is plainly brought out. Now then, the thymus is known to have a specific effect on the assimilation of those things entering into the origin of protoplasm. Also, its effect is known on colloidal tissue; it has even been sufficient to cause reduction of tumefaction. This colloid is lessened and made softer. To those hormones that were brought out in the essay, I should like to suggest the addition of the thymus. It works perfectly with nature, or physiologically, and it is indicated in all these patients where there is an enlarged prostate.

Misch Casper: Years ago, Will Mayo told me if there was something he could give to the medical profession it would be some finger cots to do rectal examinations. He did not consider any patient examined unless a rectal examination was made. If it does nothing else, it does give wonderful training for diagnosis of these early cases of prostatic cancer. Carcinoma of the prostate, as shown by Hugh Young and others, often comes in the very posterior lobe of the prostate, so-called, therefore, the easiest part of the prostate felt. Three

years ago at the A. M. A. there was one of the best exhibits I ever saw at a medical meeting. There were six figures in which the finger could be introduced to make various diagnoses in the rectum for prostatic pathology. I thought it such a wonderful thing that all colleges should have it, to get the feel of carcinoma of the prostate. After all, diagnosis is important, to get them early so that radical operation can be performed. The usual cases I get are all advanced. As a matter of fact, I don't believe I have ever found one so early that we could compare it to the breast or uterine cases, as the uterine carcinomas usually bleed early and show symptoms; also they do present a better earlier diagnosis than a good many of the prostatics, though they, too, are often seen first when far advanced.

As for treatment, this treatment of castration is not new. It was performed many years ago, before they did prostatectomies. We can see today that these old fellows have benefited by castration. Sometimes it is hard to get them to give up their testicles easily. Bob Ingersoll said that according to his judgment man should have been made to shed his testicles in his old age instead of his teeth!

For several years we have been using antrogen hormones for enlarged prostates that are not malignant. For C. A. orchidectomy is performed and stilbestrol given. The stilbestrol should be given in large doses (small doses having very little effect,) larger than we give in menopausal conditions: 20 to 35 mg. a day to get the best results.

I won't go into the operations. There is a disagreement among urologists about which is the best, the transurethral, the perineal, or the suprapubic. I believe that all these operations have a place and cases should be adjusted to conditions as we find them: for the early ones, the perineal; for the late, the transurethral, easier and best for the patient. He is not hospitalized very long, and usually gets out of bed the next day or so after operation.

J. G. Sherrill: I wish to say that Dr. Atherton has brought up a very large subject in which we are all interested. I should like to ask one question: Which is the best treatment? Removing the prostate before or after malignancy? If physical examination is not made early, we will not get it in time when it is removable and curable, that is, when it is detectable. We must use our fingers, our eyes, then we can save the patient early, before the subject of removal comes up. If we do that more in the practice of medicine, if we do more teaching today how to diagnose a case with feeling, manipulation, in every field, rather than looking at the blood, looking at this, at that, never examining the patient. That is done in every hospital in the United States.

Oscar Bloch, Jr.: I believe you said that 5 grains of morphine a day were required to relieve pain before castration and 1-4 grain every six hours after operation. That is a considerable reduction. Do you feel that is due solely to reducing the size of the tumor or is there also a specific reduction in nerve sensitivity? What does stilbestrol do to males who receive it? Does it cause emotional changes? Does it cause nausea and vomiting as it does in the female?

Herman Mahaffey: What do you consider fair control following prostatectomy? whether the patient has some trouble or not? I would suppose that excellent control was where the patient voided and controlled the stream as he wished to. Is he able to control urine, keep his clothes from soiling, or not?

W. H. Woodson: Here at the General Hospital we have treated approximately thirty cases by castration and have followed these cases in the clinic. It has been my opinion that they have not lasted any longer than those not treated with castration; however, the castrated cases have been more comfortable and especially the cases with bony metastasis have had less pain.

Lytle Atherton, (in closing): I am sorry that a single word was said about hormone therapy in carcinoma of the prostate. Dr. Bate has a better answer, particularly in multiple glandular disfunction. My interpretation and observation in the study of carcinoma of the prostate treated by castration or hormone therapy is that the question if far from being answered.

Dr. Woodson brings up the question about castration or stilbestrol. I reviewed all cases of carcinoma of the prostate treated at the General Hospital in 1942, who received hormone therapy or castration and from these records I was not able to form a satisfactory opinion as to its value due to incomplete follow-up records. It was noted, however, that many patients with metastatic symptoms were completely relieved of pain and generally improved while in the hospital after castration. In my personal cases, both stilbestrol and castration have proven satisfactory to a certain extent. It relieves pain and seems to contribute to an improvement of the patient's general health in some instances. It was also interesting to note that after the use of stilbestrol, the original "stoney" prostate was noted to become markedly softened and with improvement in the vesical symptoms.

The serum acid phosphatase in numerous cases of carcinoma of the prostate, with or without metastasis, has been of little value as a diagnostic measure as all readings have been within normal limitations. This might be ex-

plained by the laboratory technician but I might say that from our own personal experience, an elevation of one or the other would not influence my opinion of the manner in which the case should be handled.

Dr. Casper discusses the appearance of carcinoma of the prostate. Many pathologists and anatomists are of the opinion that the capsule of the prostate is formed from the prostate tissue itself due to adenomatous hyperplasia and as hypertrophy takes place, the gland tissue gradually compresses until the remnants resemble a true capsule. He discusses the simplicity in resection of the prostate. Unless the patient has a complete retention and/or is not a satisfactory surgical risk, transurethral resection may suffice but, for carcinoma this is not the answer because 9 out of 10 cases will not obtain the relief for which they sought.

In some instances we have found the malignant areas to be in close proximity with the urethra as evidenced by the urethroscopic picture and in many instances the malignant area did not involve the capsular portion of the prostate. Hence, it does not seem that malignancy may occasion from true prostatic tissue but from adenomata.

It was brought out that calcification frequently occurs in carcinoma of the prostate. In no instance did such prove to be the case. Tuberculosis and calculus formation should both be ruled out and this may be accomplished by careful digital and X-ray examination.

The question has been asked what do we consider fair control? It is simply one who does not leak on reclining; dribble on the least exertion or has difficulty in stopping stream. This condition may be corrected by constant vigilence on the part of the patient in the act of starting and stopping the stream on urination. When senility is a major factor, the Cunningham clamp may need to be used.

Mineral and Protein Metabolism—An increase in animal protein (milk, eggs, and meat) in the diet of pre-school children apparently gives rise to an increase in soft tissue growth. This inference was derived from the observation of an increase in phosphorus utilization accompanying an increase in body weight when the protein intake was raised from 3 to 4 gm. per Kg. Furthermore, the high nitrogen/phosphorus ratio indicated that a tissue rich in nitrogen was being manufactured. The weight gain was not due to enhanced calcification since the utilization of calcium was not altered in any way. There was, however, an increased retention of water but not enough to account for the gain in body weight.

RENAL PATHOLOGY FOLLOWING THE USE OF SULFA DRUGS

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Renal complications have been the focus of attention in the field of sulfa drugs in the last few years. Though I realize that what I will say is largely repetitious, there is still a diversity of statement and opinion. A large part of this is due to hasty reports on limited numbers of cases in limited conditions and also to conclusions drawn from animal experimentation which though helpful are not strictly comparable to man. If possible I shall try to sum up what has been written to date about the renal pathology and hope to re-emphasize the fact that medical science is a complex art and one which can be practiced successfully only by those who are versed and ever watchful. We have not eliminated the personal equation and each patient is an individual problem. Though the lay press and the pharmaceutical houses proclaim miracles the doctor must handle the complications of overenthusiasm.

When sulfanilamide was first used we were wont to speak of complications as toxic manifestations. With the introduction of sulfapyridine and sulfathiazole we were wont to think in terms of lessened toxicity and also of renal complications. With the arrival of sulfadiazine we hear little about toxicity and much about renal pathology. The emphasis having shifted to the kidney, the next step was to perfect a drug not only free from toxic manifestations but particularly free from renal complications. Sulfamerazine has now been launched. When sulfadiazine was first introduced we had many reports proclaiming the fact that renal pathology did not occur, but in the last year we have had to change our views. The final chapter on sulfamerazine is not yet written.

I think the understanding of the pathology from these drugs is simplified if we review a few fundamental physiochemical facts.

1. The amount of acetylation of the drug which occurs in the blood, tissues and urine.

2. The solubility of the drug and its acetylated form in the tissues.

3. The amount of reabsorption from the kidney both of the drug and its acetylated form. (This is indirectly related to the

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solubility.)

4. Rate of excretion which also varies more or less directly with 2 and 3.

5. Tendency of the drug to cause acidosis. (i.e. change in CO_2 combining power).

6. Solubility of the drug in a concentrated aqueous solution or buffered aqueous solution of varying ph as found in the urine.

See tables I and II for comparison of above in the different drugs.

The above facts combined with the amount of drug needed to produce bacteriostasis give the clue to the efficacy and development not only of complications but also of the type of complication, and therefore give the clue to remedial measures or treatment. Again this set of facts and the amount needed for bacteriostasis form the basis for the development of new drugs. For example, sulfamerazine combines minimum dose, maximum solubility in acid or alkaline solution, maximum reabsorption from the kidney, maximum solution in blood and tissues, least conjugation. We therefore expect minimum toxicity plus minimum renal damage.

The only toxic conditions which have a bearing on renal pathology are hepatitis and acute hemorrhagic anemia. We recognize that most patients who have severe liver damage develop an associated nephrosis so-called hepatic nephrosis. These patients actually develop an azotemia and death is in large part or entirely due to the renal failure. Clinically we note the appearance in the urine of albumin, casts and some leukocytes. The patients also often develope edema. In the blood we find low proteins, low chlorides, increased nonprotein nitrogen, increased urea and creatinine. The best prognostic test however, is the determination of the cholesterol level. A low or decreasing value indicates progressing failure. The picture is in no way different from that found in hepatitis due to other causes. At autopsy we find an enlarged pale kidney with bulging cut surface, obscure markings and usually hemorrhage beneath the mucous membranes of the calyses and pelvis. Histologically there is tubular epithelial degeneration with casts, bile staining, petechial hemorrhages and cellular proliferation in the glomerular tufts.

The other type of toxic injury resulting in renal damage is acute hemolytic anemia. Here again the lesions are in no way different from other types of hemolytic anemia, as for example that due to incompatible blood transfusion. Here the death of the patient is due directly to anuria and uremia. The mechanism is a plugging of all portions of the renal tubules with blood pigment and altered red blood cells. The blood count of course will show a

Table I

Drug	Amount Conjugated in Blood and Tissues	Amount Conjugated in Urine	Rate of Excretion
Sulfanilamide	10-20%	30-50%	? several days
Sulfapyridine	Higher % than Sulfanilamide	More than Sulfanilamide	4-5 days
Sulfathiazole	Less than Sulfapyridine More than Sulfanilamide	Less than either of above	24 hours
Sulfadiazine	Less than any of above	Less than any of above	48 hours
Sulfamerazine	Less than any of above	Less than any of above	Over 3 days

Table II

Drug	Solubility in Tissues	Reabsorption from Kidney	Blood Level as an Index of Amt. in Kidney	Occurrence of Acidosis
Sulfanilamide	good	good	good	frequent
Sulfapyridine	good, less than above	good, less than above	fairly good	moderately frequent
Sulfathiazole	good, less than Sulfanilamide	poor	poor	occurs not frequent
Sulfadiazine	poor, less than any of above	poor	poor	does not occur
Sulfamerazine	good	good	good	does not occur

Table III

Drug	Hepatitis	Hemolytic Anemia
Sulfanilamide	Few fatal cases reported	Not uncommon 1st - 21st days of treatment, particularly in negroes
Sulfapyridine	Occurs	Moderately common in first few days of treatment
Sulfathiazole	Rare	Reported but infrequent
Sulfadiazine	None reported	Rare, but occurs
Sulfamerazine	None reported	Not reported

drop in red blood count and hemoglobin with later on an increase in nucleated reds. There will also be an increasing icterus index with direct reaction. If the condition progresses the blood nonprotein nitrogen, urea and creatinine will go up. The urine will be brown or port wine color from the presence of hemoglobin, many red blood cells and shadow cells. At autopsy the kidney findings of significance are the markings of the tubules by brownish or reddish brown material. Histologically these tubules are found plugged with blood pigment and altered blood cells. The tubular epithelium shows a secondary pressure atrophy and some of the cells will contain granules of pigment.

Table three shows the drugs which may produce hepatitis and hemolytic anemia and the relative frequency of occurrence.

These two types of complications have greatly diminished of course in the last three years due to the replacement of sulfanilamide, sulfapyridine and to some extent sulfathiazole by sulfadiazine. However, these drugs are not as we know interchangeable. The choice of drug depends on the etiological agent, the type of disease and to some extent on the condition of the patient, not forgetting individual sensitization. In the armed forces they have also had to consider the environment including loss of fluids in tropics and in burn cases and the type of medical supervision which is available. Therefore in anuria or signs of renal injury or insufficiency we have still to keep these two toxic conditions in mind.

This brings us to the question of more direct or we might say primary renal damage. With the introduction of sulfapyridine and sulfathiazole we heard a great deal about crystalluria and routine daily examination of the urine for crystals came into vogue. Crystalluria per se with no further urinary findings is important only as indicating that there is not a sufficient fluid output or sufficient alkalinity to keep the drug in solution. Hematuria is the next and most important finding from the point of view of preventing or minimizing anuria. This finding was first reported in 1939 in patients treated with sulfapyridine. In a survey by the National Research Council in 1941, 8% of patients receiving sulfapyridine showed hematuria and this complication was the highest in incidence. In the same survey sulfathiazole treated patients showed 2.5% of hematuria. Associated with this is nitrogen retention and abdominal pain. These patients may also show edema and crystalluria with the hematuria. The popular view held was that the hematuria was due to mechanical injury of the collecting tubules and ureters by the crystals, particularly crystals of the acetylated type or form. These crystals do have sharp edges and corners. However, my personal view is that there is an associated tubular change. In a case study of some 60 patients in which the urine, kidney function and blood chemistries were recorded before treatment and again after treatment with sulfathiazole, it was found in all cases that the urea clearance was reduced, nonprotein nitrogen became elevated and some of the patients showed albuminuria. The changes in all but one patient were transient and cleared shortly after cessation and excretion of the drug. Further I have carefully gone over all the kidneys of the patients autopsied by me who had been on sulfa drugs and though we know tubular injuries are very common with all types of diseases yet there appeared to be more changes in the sulfa treated cases than in those not so treated. Again it has been noted in the literature and also among our patients that evidence of renal damage after these drugs is found much more frequently among the elderly in whom we have a reduced renal reserve and among those who showed abnormal urinary findings before beginning of treatment.

Presence of acetylation may be consider-

ed in this instance as a perversion of a protective mechanism. Conjugation in the liver of harmful substances to harmless or less harmless ones is a part of daily metabolism. Here however, the conjugated form is actually more toxic than the free form. Therefore the less readily conjugation takes place the less toxicity one would expect to find. Marshall et al. are attacking this problem by trying to find some salt or compound which when taken with the sulfa drugs will not interfere with their therapeutic effectiveness and at the same time prevent acetylation. They have thus far succeeded in animals with some compounds. Unfortunately compounds which work with one animal do not work with another and so far they have found none which work in man. However their report appearing in the January 1944 number of the Journal of Biochemical Sciences states they are continuing work along this line. One of their two stated objects in preventing acetylation is to prevent the acetylated crystals from causing renal damage.

In addition to mechanical damage large collections of crystals of the acetylated or free drug can also produce obstruction with resulting anuria. If unrelieved this will of course result in azotemia. I will not enlarge upon this as I do not wish to encroach on Dr. Grant's preserves.

This brings us to sulfadiazine which as mentioned above first was reported to give rise to no urinary symptoms. By the end of 1942 6 fatal cases of anuria from this drug were reported. Others were reported for 1943 and we had one such death at Norton. Previously we had also had to my knowledge two deaths from anuria from sulfathiazole.

The case in question was diagnosed clinically and confirmed at autopsy to be one of anuria resulting from a toxic nephrosis from sulfadiazine. Death occurred in spite of adequate treatment. The patient was 77 years old, white male who was admitted for resection of carcinoma of the prostate and orchidectomy. On admission the patient's urine contained albumin, pus and blood and his blood nonprotein nitrogen was 42.9 mgs% or just above the upper limit of normal. Sulfathiazole was given post-operatively as prophylaxis against infection. 69.3 grains were given over a period of three days. After a period of rest the patient was switched to sulfadiazine as there was recorded a gradual diminishing urinary output and his blood nonprotein nitrogen increased to 78. mgs%. 107.8 grains of sulfadiazine were given over a period of two days. The nonprotein nitrogen rose to 89.7 mgs% two days prior to death and the urinary output continued to decrease in spite of alkali and forced fluids. The fluid intake varied anywhere from 1640 cc. per day to 4660 cc, but the urinary output had a progressive decrease from 2750 cc. on day following operation to 25 cc. three days before death. See table IV

At autopsy the kidneys were enlarged, the capsules stripped with ease, the cut surfaces bulged and the tissue had a pale yellow cast and obscured markings. Small glistening crystals could be scraped from the surfaces both of the cortex and medulla and there were larger masses of gravel-like material in the calyses. These crystals gave a chemical test for sulfa drugs, and under the microscope had the typical appearance of sulfadiazine crystals. Histologically there was a very nearly complete degeneration of the tubular epithelium with focal collections of cells largely plasma cells with a few lymphocytes and monocytes in the interstitial tissue. This is the typical "toxic nephrosis" due to this drug as described by others reporting anuria from this cause.

In this connection in the November 1943 bulletin of the U. S. Army Medical Reports the committee on Surgery of the National Research Council recommend that all casualties receive only one single dose of 4 gms of sulfadiazine with none further until the patients were received at fixed hospitals. On the recommendation of the medical officer 1 gm might be given every six hours thereafter except in burn cases. The reason for this order was that renal complications were frequent with sulfadiazine therapy and they reported

Table IV

Post-op day	1	2	3	4	5	6	7	8	9	10	11	12
Intake cc	1640	1800	3700	2600	2700	2300	2500	2150	4660	1870	2930	570
Output cc	2750	1960	1260	1230	1000	1000	1930	980	120	30	25	0
NPN mgs%	42.9*								78.		89.7	

*(pre-op value)

3 cases of anuria of 24 to 96 hours duration, and two cases with colic 36 to 48 hours after cessation of drugs. They also reported symptoms in two cases in which the urinary outputs were over 1000 and 1100 cc respectively. A similar report was received from another Army hospital. They also changed their patients from sulfadiazine to sulfanilamide as soon as satisfactory response to treatment was evidenced. Sufficient sulfanilamide was given to maintain the blood level and keep down bacterial reproduction, and they have found that with this routine less serious complications, that is renal complications occur.

We are often asked if accumulations of sulfa crystals are radio-opaque. As far as I know they are not opaque but if for some reason calcium is added then as would be expected we get a shadow cast on X-ray. As we know calcium has a tendency to precipitate in alkaline urine. In all the cases where calcium nephrosis has been reported following sulfa drugs there has of course been an attempt to alkalinize the urine. Further all these cases had pre-existing lesions either of the tubules or stasis lower in the tract or stasis plus infection. Apparently a small crystal or groups of crystals of sulfa drugs may be the nidus upon which calcium salts are deposited. We had one case at Norton of anuria due to a block by sulfadiazine in the pelvis of the kidney. There was a radio-opaque shadow no doubt due to added calcium material. After ureteral lavage and removal of the block the shadow disappeared. This patient had a pre-existing pyelitis. Of two cases reported in the literature one appeared after sulfapyridine. Two years after therapy with this drug there was surgical removal from the renal pelvis of a large mass part of which proved to be sulfapyridine. The second case some weeks following therapy had a fibrinopurulent membrane with calcium deposit and mixed sulfa drug. In this case, too, surgical intervention was necessary. Deposits of calcium are also found in the tissue about the kidney tubules in patients having had tubular damage.

In conclusion apart from the early toxic manifestations and individual sensitivity to the first sulfa drugs used, the introduction of sulfapyridine, sulfathiazole and sulfadiazine has led to serious renal complications.

THE TREATMENT OF UROLOGICAL CONDITIONS RESULTING FROM THE ADMINISTRATION OF SULFONAMIDES

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The treatment of Sulfonamide reactions on the kidneys has assumed such proportions in the past year that one hazards much repetition in discussing them because the literature has been so rich in articles upon this subject, but on the other hand the enthusiasm for the use of these drugs has become so enhanced that multiple examples of their dangers are almost daily coming to the notice of urologists. It is not our purpose to discuss the efficiency of these drugs in combatting infection, because each individual case as well as each individual physician who has his own established convictions on the value of the therapy must always form the ultimate conclusion as to its virtue. Unquestionably they have been a great boon to the treatment of infections and until some less toxic and equally efficacious drug is produced they must be our chief reliance. But their blessing is not unmitigated and it is with the untoward results upon the renal system that we should like to direct your attention both from a preventive standpoint and a consideration of the methods of alleviating these distresses once they have occurred.

The pathology of drugs' reactions on the kidneys has been outlined by Dr. Greenwood, the previous speaker, and she has shown that they consist principally in precipitation of the crystals that block the normal channels of the outflow of the urine, either in the tubules or in the grosser collection in the larger basins or reservoir, the pelvis of the kidney. The evil results so far as the kidneys are concerned are not the result of the toxic action of the drug itself so much as it is in the interference with the drainage from the blood stream of the normal products of metabolism that occasion uremia and death from auto-intoxication.

The preventive factors that enter into consideration when the administration of the sulfonamides is contemplated I think merit much more attention than is

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usually given them. It has become almost automatic with so many of us to prescribe some form of sulfonamide therapeusis as soon as we detect evidence of infection in almost any part of the body, regardless of age or the condition of the patient and without a study of the renal function, and herein lies the initial difficulty. So great has the enthusiasm for sulfonamide therapy developed that some surgeons, and not the least of them urological surgeons either, have adopted a routine of prescribing sulfonamides prior to operation to combat the anticipated infection that is likely to occur. This latter is not a practice to be unconditionally condemned, because where the patient is in a hospital where he can be observed hourly, initial symptoms and study of his concentration of the drug in the blood can be closely followed and a satisfactory control be established, but as a routine without careful observation it is a dangerous procedure.

All even comparatively healthy patients from a renal standpoint do not react to this medication alike as you well know. Just as the greatest variance is to be detected in the other somatic symptoms unrelated to urinary tract such as nausea, vomiting, rise in temperature, dizziness, disorientation and the like just so do the kidneys of even normal condition vary in their reaction to the formation of the crystals. For this reason it is of paramount importance to observe certain precautions in every case with the administration of the drug. First of all any patient who has any symptoms of renal impairment such as nephritis of any degree, pus or blood in the urine, a cachectic or even debilitated general condition or with marked acidity of the urine as is present in certain cerebral conditions, or digestive derangements are considered the most unfavorable types and the most likely to crystalize the drug in the tubules. In such cases extreme care and watchfulness is mandatory.

Second, the ingestion of large quantities of fluid, to at least 2000 cc. a day is a secondary precaution of great importance. This is often precluded in cases with edema due to either the heart or the kidneys and sulfonamides should be given only under the strictest observation.

Third, essentially these drugs and their acetyl derivatives are weak acids and their solubility is greatly increased by increasing their ionization and soluble salt formation by the addition of alkali. Jensen and Fox have shown that the solubility in urine is minimal from pH 5.6 to 6.0 and is doubled or even tripled at pH 7.5 and increased tenfold at pH 8.0. Because their renal precipitation is definitely related to their solubility the indication for the use of alkalies in conjunction with their therapy is clear. Sufficient alkali, the best of which is perhaps sodium bicarbonate, should be administered in such quantities as to neutralize the weak acidity of the drugs and their derivatives themselves in addition to the usual acidity of the urine. Definite quantitative doses of the alkali cannot be predetermined in every case of course, but a satisfactory criterion is found in the reaction of the urine which should never be permitted to fall below 7.5 during the medication and if quantitative determinations are not convenient the reaction should be kept definitely alkaline to litmus paper. After the precipitation has occurred the mere rendition of the urine to alkaline is not always sufficient to relieve the blockage. We have seen many cases of renal and tubular block in consultation where the urine at the time we were consulted was definitely alkaline, but often in these cases no study of the reaction was made prior to the ingestion of the drug. In our own work we use great quantities of the sulfonamides but always with the precautions of large amounts of fluid, intravenously if necessary, and definite alkalinization of the urine, and so far as I know have never had a case of renal block occur.

The initial symptoms of renal block vary in their character according to the time that observation is made. Probably the first is diminution in the quantity of the urine in relation to the intake of fluids, which when taken even in conjunction with profuse diaphoresis is most important. The fact that the patient is sweating does not in the least indicate that crystallization of the drug is not taking place in the kidney and indeed the reverse is true, because less fluid is reaching the kidney to keep the crystals in solution in such a case than normally. So the excretion of fluid must be measured wholly in terms of urine secreted. An early indication of renal block is the rise in the non-protein nitrogen content of the blood. This is occasioned of course by the incapacity of the blocked tubules to remove the nitrogenous products from the blood normally. A third indication is a rise of the concentration of the drug in the blood level. The more serious symptoms are the

finding of crystals in large quantities in the urine, the presence of hematuria of even small quantity when it cannot otherwise be accounted for, and the appearance of leucopenia.

The therapy of renal block by the sulphonamides depends partially on the severity of the symptoms and partially upon the reactions of the patients to this therapy. The first thing to do in diagnosed cases of renal block is to increase the fluids immediately and abundantly. The second is to alkalinize the patient to pH 8.0 if possible. This of course presupposes that the administration of the drug is stopped immediately on the discovery of the block. Sometimes these symptoms will occur most abruptly without any premonitory suggestion at all. Often the quantity of the drug taken will have been so small as to make it seem impossible that this could be the cause, but different organisms react very differently to this drug just as they do to the arsenicals, and we have seen many patients who have taken this drug over a period of months in large quantities without any suggestion of block even though the ordinary precautions were not observed, and on the other hand have seen definite block occur after even a day's administration of customarily 3 grams. So in the administration of the drug the patient's susceptibility must be quite as much considered as the dosage of the drug.

When oliguria or hematuria appear one can never positively say whether the basic trouble is in the tubules or in the collection of crystals in the pelvis that obstruct the outflow of urine. It is reasonable to assume that if enough collection of crystals has taken place to block the pelvis that a great quantity of them must be in the tubules at the same time and it is on this rationale that the early treatment is instituted. X-ray is practically useless in outlining the shadow of the stones and in a case of moderately long standing one can never be sure whether the obstruction is mechanical in the tubules or in the pelvis. The administration of intravenous dye is not only hazardous in these cases, but in marked oliguria or anuria is quite useless as the drug will not be secreted into the pelvis. Catheterization of the ureters in oliguria is a somewhat hazardous procedure and may even add to the insult from which the kidneys already suffer. So our first thought is to try to force dilute fluids of as high an alkaline content as possible through the kidneys. The administration of the powerful diuretics is likewise contraindicated, though concentrated glucose may be given without risk. Along with the administration of alkaline fluids, heat to the renal region should be employed and this is best given by far through the medium of diathermy. Great intrarenal pressure is considered most responsible for the anuria and unquestionably warmth applied to the kidney and to surrounding structures helps to relieve this.

Failing in the simpler methods of relief we must turn to some form of releasing the obstruction by direct mechanical means. The simplest of these is lavage of the renal pelvis with large quantities of very warm solution of sodium bicarbonate. If this can be introduced into the renal pelvis through a ureteral catheter and the lavage kept continuous many happy results have been seen. It is not always a simple matter to lavage a renal pelvis, often in men it requires an anesthetic and on several occasions we have found the ureters blocked by the crystals as well and it takes very little obstruction often to inhibit the passage of a ureteral catheter. If the lavage gives evidence of accomplishing some washing away of crystals the catheter should be left in place and the pelvis frequently flushed. Even if only one ureter can be catheterized successfully such temporary relief may restore the function in that kidney sufficiently to tide the patient over. Cystoscopy and ureteral catheterization should by no means be considered a last resort in treatment, but any anuria attributable to sulfonamides that has lasted 24 hours should have this procedure employed.

If cystoscopic treatment fails to restore some adequate flow of urine then direct surgery of the kidney is indicated before the condition of the patient becomes too precarious. Either one or both kidneys may be involved. Even where one kidney only is obstructed definite cases of anuria have been known to develop, and this is probably analagous in origin to the reno-renal reflex of calculus anuria. Ordinarily however the assumption is that both kidneys are the site of block, provided there is no demonstrable impairment prior to this in one or the other. When surgical procedure is decided upon the selection of one kidney is usually made because the restoration of one kidney will often tide the patient over a critical period and, if necessary, a subsequent similar treatment

can be given the other kidney later.

The surgical procedure of choice consists unquestionably in a combination of decapsulation of the kidney and nephropyelostomy. The decapsulation relieves the tension which is almost invariably found at autopsy at least as resultant if not a causative factor and the nephropyelostomy permits of continuous irrigation of the kidney through the pelvis with the solutions designed to dissolve the crystals.

I think that there are three very important factors to be impressed in the consideration of treatment for sulfonamide block; the first, the scrupulous employment of large amounts of fluid and alkalinization with the administration of the drug; second, the prompt attempts at relief with measures of progressing gravity according to how the patient reacts, and third and not in the least last, the more than reasonable assurance that the anuria is due to sulfonamide block. Many reports of patients have been made where operation was done to presumably relieve sulfonamide block because the patient at the time happened to be taking the drug where some other pathology was the true cause and the association coupled with the fear made hasty surgery unnecessary.

DISCUSSION

Herman Mahaffey: I would like to report a recent experience in which Dr. Grant was the consultant. We had a lady who was treated for a bad cold for an entire week previous to admission to the hospital. On admission to the hospital, she gave a history of not having passed urine for twelve hours. Yet she had the desire to pass urine. The nurse catheterized the patient, reporting that two or three drops of blood were obtained but no urine. I catheterized the patient three hours later and was unable to obtain urine.

We advised treatment and patient received, during the next ten hours, two fifty cc. ampules of 50% Glucose solution and an additional 2000 cc. of 5% Glucose intravenously.

Thirty-six hours following admission to hospital, she was taken to the Cystoscopic Room, and repeated attempts were made to catheterize both ureters, all of which failed. The openings in the catheters would block up with some substance from the ureters. The catheter would pass from one-half to three-fourths of an inch into each ureter at which point it met obstruction. I then called for assistance from Dr. Grant or Dr. Atherton and found both to be out of town. I then called Dr. Fuller from the General Hospital who came in consultation. We contacted Dr. Grant for consultation at approximately eight P. M. the same evening. When he arrived, we found that the patient had passed about one ounce of thick, dark urine. On examination, this specimen was found to contain much blood, pus, and many crystals resembling Sulfathiazole crystals and showed a four plus albumin. Dr. Grant suggested a gastric lavage with strong Bicarbonate of Soda solution; 60 grains of Bicarbonate of Soda by mouth every three hours; one ampule of 50 cc. of 50% Glucose; and 1000 cc. of 5% Glucose intravenously. Dr. Grant suggested that since urine was beginning to pass into the bladder, it was unnecessary to attempt further catheterization of ureters at this time. During the next twelve hours, the patient passed 430 cc. of urine. Examination of this revealed a three plus albumin, some blood and pus, but no Sulfathiazole crystals.

We could not obtain a definite history of Sulfathiazole Therapy prior to finding of the crystals in the urine. Later, we definitely established that the patient had had Sulfathiazole medication prior to hospital admission.

The patient complained of a great deal of pain over both kidney regions, extending through to the anterior abdominal wall. Percussion and palpation elicited tenderness over both kidney areas; also, there was complaint of pain down the line of abdomen where we expect ureteral pain to be found. Temperature was never above 100 degrees, and there were no signs of Uremic poisoning. Patient was conscious during entire hospital stay. Following the establishment of urinary out-put, a light diet was given and fluids were forced. Daily examinations of urine revealed a rather rapid decrease of blood, pus, and albumin. On day of dismissal, some five days later, there was no albumin or pus, and only an occasional blood cell.

I think we should and must be more careful in the administration of the Sulfa drugs. Alkalinization, preferably by bicarbonate of soda, forcing of fluids and the careful check of urinary out-put to insure that the twenty-four out-put does not fall below 1500 cc. should always accompany the use of the Sulfa drugs. Should the urinary out-put fall below 1500 cc., use of the drug should be discontinued.

Oscar Bloch, Jr.: I should like to ask whether or not in the case of sulfamerazine it is necessary to use alkalies as with sulfadiazine and sulfathiazole.

Also, in Dr. Grant's experience, how much sodium bicarbonate is usually adequate to produce a pH of 8 in a patient on average diet?

James Robert Hendon: In connection with the intravenous solutions used in the treatment of renal obstruction following the sulfonamides, I should like to ask Dr. Grant what vehicle is

used in carrying the dextrose? In the cases which must be treated by nephropylostomy, what irrigating solution is used?

It occurred to me that several cases of calcium phosphate renal or bladder stones have been treated successfully at the Massachusetts General Hospital by dissolving stones with irrigations of a solution the chief constituent of which is sodium citrate. It would seem that the same or similar solutions would be the one of choice in the cases where nephropyelostomy was necessary.

J. G. Sherrill: Have you ever used potassium instead of sodium? I have seen articles in the literature where sodium proved to be a poison. I do not know, but I should like to know if this is true or not.

Owsley Grant. (in closing): In reply to Dr. Bloch's question about alkalinization of the patient, as I said, there are so many factors. I do not feel that sulfathiazole is particularly efficacious and is definitely dangerous unless urine is definitely alkaline to litmus. The attempt to get 7.5 pH is pretty difficult in a good many types of cases. In the ordinary patient, 7.5 is not particularly hard to do. It increases the solubility of the sulfa drug. I am not speaking of sulfamerizine but in relation to other drugs, the solubility is increased in almost geometric proportion, with sodium bicarbonate.

Dr. Hendon asked about irrigating solution. We have found the most important thing is fluid. In nephropyelostomy, a McIver tube is put through from the pelvis to the outside, making a connection and leaving both ends of the tube outside the body. There is no purpose in going through the ureter unless there is a definite block. There is one single tube from above, with both openings to the outside. We are most interested in the getting of large quantities of fluid, sodium bicarbonate, usually, in solution. The amount makes no great difference so long as it is alkaline. Let as much go into the kidney as can. What leaks is all outside. The kidney is constantly bathed.

Intravenous injections of sodium bicarbonate are extraordinarily difficult to obtain. We have a lot of trouble. Have used them in one or two cases in which we could not get the patient to retain alkalies, but it is difficult to produce, with some damage to blood vessels.

Ringers has some of the alkaline solution. I really think that as far as Ringers is concerned it is unable to produce alkalinity of urine. I think bicarbonate of soda is the best solution. Added to it, the ingestion of sodium bicarbonate is especially efficacious. A large number of patients have gastric distress that can be helped by lavage.

A STUDY OF FORTY-SIX CASES OF POLIOMYELITIS

Edwin P. Scott, M. D.
Gradie R. Rowntree, M. D.
Louisville

Departments of Pediatrics and Public Health, University of Louisville School of Medicine, from the Communicable Disease Service of Dr. James W. Bruce and Dr. W. W. Nicholson.

Since an unusual number of cases of poliomyelitis was admitted to the Louisville General Hospital in the year 1941, this study was undertaken.

From March 9 to November 7, 1941, 46 cases were admitted. Over 80 per cent of the cases occurred from July 1 to October 31. Of the 46 cases, 34 were residents of Louisville and Jefferson County. The remaining 12 came from sections of Kentucky outside Jefferson County. There were 25 males and 21 females. Only two of the 46 patients were colored.

The average age of the cases was seven years and four months. The oldest of the group was twenty-eight years and the youngest one month. Three of the cases were under one year of age. More than 80 per cent of the cases were below the age of ten years and over 50 per cent below the age of five years.

Of the 34 cases occurring in Louisville and Jefferson County, 14 lived near Beargrass Creek. (See Figure 1) This creek is a winding stream which runs through the eastern part of the city of Louisville for a distance of about four miles. The creek whenever tested has been found to be contaminated with B. Coli. In an effort to find some relationship between the etiological agent of poliomyelitis and the environment, the home of each case reported was visited by state and local epidemiologists and an investigation, with a thorough inspection of the premises, was made. Because of the close proximity of these cases to Beargrass Creek, such factors as flies, mosquitoes, facilities for sewage disposal and individual contact with the creek water were especially noted. From an epidemiological standpoint, no definite conclusions were reached.

From the histories on the 34 cases in Louisville and Jefferson County, it was found that 54 per cent of the patients had made visits out of the city within a month of the onset of the disease. The municipal water supply and sewers were used by 90 per cent of the individuals. In 60 per cent of the homes from which the patients

came, the families stated that flies and mosquitoes were more abundant this year than usual.

The average lapse of time from onset of the symptoms of poliomyelitis to admission to the hospital was 5.6 days. This, however, is not a true index as to the time elapsed before hospitalization was advised, as some of the patients were being treated at home by private physicians and some of the cases had been under treatment in other hospitals before being transferred to the Louisville General Hospital.

In reviewing the symptoms prior to admission to the hospital, it was found that paralysis and fever were the most common symptoms. Thirty-two of the 46 patients had paralysis and thirty-seven had fever. Seven other patients developed paralysis shortly after admission. Two patients had tonsillectomies shortly before admission.

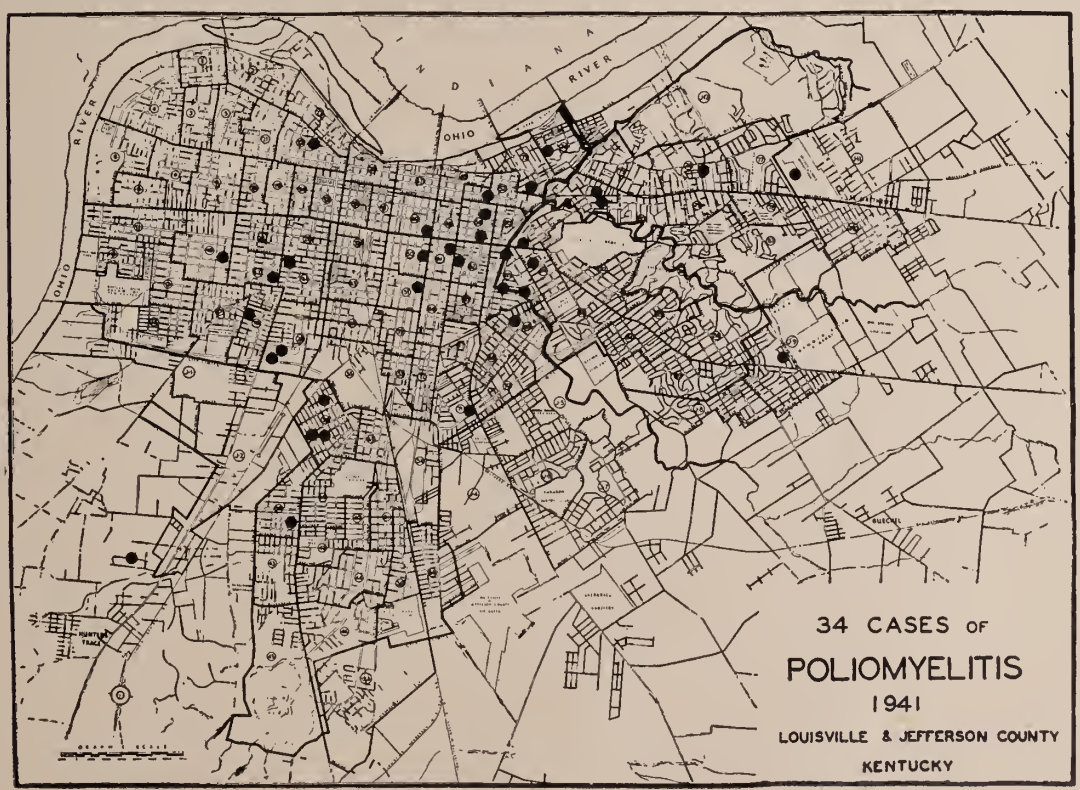
Twenty-eight patients had paralysis of the lower extremities, seven in only the right leg, and two in only the left leg. Nineteen patients had paralysis in the upper extremities, six in only the right arm and three in only the left arm. One patient had marked bulbar paralysis, one had paralysis of deglutition and one spoke with a marked nasal twang.

The most common chief complaints on admission were "Polio," "cold," "can't walk," and "paralysis."

The average temperature (rectal), pulse, and respiration recorded on admission were 100.1° F., 108, and 26 respectively.

The physical examination on admission revealed that over 50 per cent of the patients had stiff neck, head drop (neck weakness), and muscle weakness or paralysis. In a few cases the reflexes were absent clinically, yet there was not complete paralysis.

Lumbar punctures were done on forty-five patients at the time of admission, which as stated previously, was 5.6 days after onset of symptoms. In all except a few instances (bloody lumbar puncture) the spinal fluid was crystal clear. The highest spinal fluid cell count was 471 white blood cells per cu. mm. and the lowest was 0. The average white blood cell count of the spinal fluid (initial lumbar puncture) of forty-three patients was 69.3 cells per cu. mm. Lymphocytes were the predominating cells found. In most cases if the polymorphonuclears predominated on the initial lumbar puncture, there would be a predominance of lymphocytes on the subsequent lumbar punctures. There seemed to be no relation between



the spinal fluid cell count and the extent of paralysis. There seemed to be no specific alteration of the sugar content of the spinal fluid, but the total protein seemed to be uniformly increased.

Thirty-two of the total forty-six patients had blood counts on admission. The average red blood cell count was 4,500,000 per cu. mm. with 83 per cent hemoglobin and a white blood cell count of 10,844 per cu. mm.

Eleven, or twenty per cent of the cases, were placed in a respirator for an average of 16 days per patient for a total of 175 days. One case was discharged in a respirator to a private hospital and was later sent home in a respirator. She died of intestinal obstruction while still in the respirator. Copious amounts of mineral oil were given by mouth to patients in the respirator to prevent fecal impaction. The number of patients placed in respirators may seem high, but at the time this appeared to be the best method of treatment.

Toronto splints were used in all of the cases with paralysis or suspected impending paralysis. Bradford frames were used to hold the splints in their proper position. Splints and frames were also used on respirator patients. One case had both legs placed in plaster casts before admission.

The only therapy other than splints was a high vitamin diet, thiamin chloride either orally or intravenously, and Doryl for any urinary difficulty. Convalescent blood or plasma was used in a few cases including several confined to the respirator. Tracheotomy was used in one case of bulbar poliomyelitis as a last resort without survival.

A two year follow up study was made on a majority of the cases among children, since they were being seen at regular intervals by the Kentucky Crippled Children's Commission. Follow up studies were obtained on 39 of the 46 patients. The remaining seven could not be located.

Of the 39 cases followed, 9 made a complete recovery. Twelve patients have been released from any further therapy with the following results: Seven are able to walk, 3 are able to walk with the aid of artificial appliances, and 2 are unable to walk. Of the 15 patients still under treatment, 8 are able to walk, 3 are able to walk with artificial appliances, and 4 are unable to walk.

Three of the 39 cases died. One died during the acute stage with a bulbar paralysis, another died in the home from intestinal obstruction while still in the respirator, and the third died three weeks after discharge from a post-operative medullo-blastoma.

It is interesting to note that of the 11 respirator patients, only one made a complete recovery, 4 are able to walk, 4 are unable to walk but as yet have not been released from treatment, one died, and one could not be located for follow up.

Summary

1. Forty-six cases diagnosed as poliomyelitis admitted to the Louisville General Hospital during the year 1941 have been summarized as to geographical distribution, age, sex, color, epidemiology, common symptoms, physical findings and laboratory examinations.

2. Toronto splints with Bradford frames were used as a mehod of treatment along with supportive therapy.

3. A two year follow up study is presented.

Conclusion

The results of the treatment used are not encouraging.

DIABETIC GANGRENE OF THE NASAL SEPTUM AND DIABETIC COMA IN A WOMAN 66 YEARS OLD

Frederick G. Speidel, M. D.

Louisville

Mrs. W. R. L., age 66 years, was sent to St. Joseph's Infirmary on the afternoon of August 14, 1942, by Dr. Carroll C. English. She had complained of a "sore" on the right side of her nasal septum, which had been present about three weeks and would not heal. Dr. English found also an irregularity of the heart action with some evidence of cardiac decompensation, and sent her to the hospital for further study.

Her family history was irrelevant. She had been married twice and had had four children by her first husband. Three of these children are living and well and one died of tuberculosis. She has had no significant previous illnesses.

On admission to the hospital her urine was found to give marked reactions for sugar, albumin and acetone and to contain many pus cells. Her red blood cells numbered 5,290,000 with a hemoglobin percentage of 102, which was indicative of dehydration. Leucocytes numbered 16,900. The next morning, Aug. 15, her blood sugar was

Read before the Jefferson County Medical Society, November 1, 1943.

found to be 370.3 mgs. per cent. Dr. English asked me to take charge of the diabetic aspect of her condition and Dr. F. W. Urton was asked to examine and treat her nasal complications. He promptly made a diagnosis of diabetic gangrene of the nasal septum, right ethmoiditis and right optic atrophy. The Kahn test on her blood was negative.

I first saw this patient at 3:30 p. m., August 15, shortly after Dr. English's visit the same day. She had lapsed into deep coma. The carbon dioxide carrying capacity of her blood plasma was found to be 10.3 volumes per cent and she could not be aroused.

She was given 40 units of regular insulin intravenously, 40 units of protamine zinc insulin intramuscularly and 40 units of protamine zinc insulin hypodermically. Five percent glucose in physiological saline solution was started intravenously and during the ensuing 36 hours 4 liters were given.

She became conscious at 6 p. m. the following day, August 16. At that time her blood sugar was 166.0 mgs. per cent and her plasma CO_2 capacity was 25.1 volumes per cent. During the next five days she was given fruit juices, milk and other liquids by mouth ad libitum. Her blood sugar varied from 320.0 to 47.0 mgs. per cent. Daily determinations of the plasma CO_2 capacity showed a persistent rise and on the sixth day after onset of coma was 60.0 volumes per cent which is within normal limits.

At this time she was given a diet of carbohydrates 105 grams, protein 60 grams, and fat 93 grams, yielding 1497 calories or 25 calories per kilogram of body weight. (Her weight was later found to be 130 pounds, about 60 kilograms.)

The first week or ten days of her illness presented numerous clinical difficulties. In addition to wide fluctuations in her blood sugar, her heart condition necessitated the administration of digitalis and quinidine sulfate, the severe headache, due to her nasal and ocular condition required codeine frequently and morphine occasionally for relief. The removal of the dried blood, mucus, and detritus from her nasal cavities which were almost completely occluded was a delicate and disagreeable task, and the pus in her urine was combatted with sulfadiazine.

By the tenth day in the hospital her blood sugar had been stabilized fairly well by the administration of 20 units of regular insulin before each meal. She was now changed over gradually to protamine zinc insulin and in a week was being given 60 units once daily. Her blood sugar then varied from 100.0 and 150.0 mgs. per cent. She was discharged from the hospital on October 6, 1942. On that date her blood sugar was 138.5 mgs. per cent and her urine was normal chemically and microscopically. She lost the vision in her right eye completely and was later found to have 20/40 vision in the left eye.

This patient has been seen by Dr. Urton and myself at her home and in our respective offices on numerous occasions since her discharge from the hospital. On May 4, 1943, Dr. Urton was able to remove the gangrenous portion of her nasal septum, a piece roughly oblong in shape measuring about one and one half inches long and one inch wide.

At present she adheres conscientiously to her diabetic regime and although blind in one eye and with a perforated nasal septum is apparently in good health.

BOOK REVIEWS

PSYCHOSOMATIC MEDICINE, THE CLINICAL APPLICATION OF PSYCHOPATHOLOGY TO GENERAL MEDICAL PROBLEMS: By Edward Weiss, M. D., Professor of Clinical Medicine, Temple University Medical School, Philadelphia, and O. Spurgeon English, M. D., Professor of Psychiatry, Temple University Medical School, Philadelphia. 687 pages 6" x 9". Price $8.00. W. B. Saunders Company, Philadelphia and London, Publishers.

It is now recognized that about two-thirds of all patients that come to the average physician's office have an emotional disturbance which accounts for or complicates their physical symptoms. About one-half of this large portion of the average physician's patients have no demonstrable physical abnormality to account for their symptoms. Their symptoms must, therefore, be functional in origin, these functional disturbances arising from emotional imbalance. The other half of this large portion of the physician's patients do have demonstrable physical abnormalities such as gastric ulcer, hypertension, asthma, and various skin diseases, which account for their complaints, but these patients have, in addition, emotional disturbances which may have given rise to or are complicating the physical abnormalities. It seems logical that if this large percentage of the average physician's patients are to be satisfactorily treated, the disturbing emotional background must be recognized and dealt with.

It is particularly important, at this time, for the physician to concern himself more with the recognition of the emotional factor involv-

ed in his patient's complaints. Men and women are being rejected or discharged daily from military service because of disabilities arising from emotional and nervous disturbances. These men and women are returning to their home communities in most of which there is no trained psychiatric help. Their only help must come from the family doctor.

The book, "Psychosomatic Medicine" gives the practicing physician an excellent insight into the psychoneuroses that may be handicapping his patients. At the beginning of the book, the more common psychoneuroses are briefly but sufficiently discussed to give the physician a sound basic understanding of these conditions. Through subsequent chapters these conditions are correlated with various physical manifestations through interesting case reports which establish, beyond reasonable doubt, their etiological relationship. The role of emotional disturbances in such physical complaints as palpitation, dizziness, recurrent headaches, nausea, vomiting, diarrhea, constipation, frigidity, impotence and many others is appropriately illustrated. The book will help the physician understand his neurotic patients and then tell him how to manage them.

One of the most helpful chapters is that on "Normal" Problems in Psychotherapy. In this chapter the physician is given the causes of such behavior problems in children as enuresis, thumb sucking, tantrums, nightmares, masturbation, feeding difficulties and many others together with logical means of dealing with these problems.

FEMALE ENDOCRINOLOGY: By Jacob Hoffman, A. B., M. D., Demonstrator in Gynecology, Jefferson Medical College; Pathologist in Gynecology, Jefferson Hospital; Formerly Research Fellow in Endocrinology and Director of the Endocrine Clinic, Gynecological Department, Jefferson Hospital, Philadelphia. 788 pages with 180 illustrations, including some in colors. Philadelphia and London: W. B. Saunders Company, 1944. Price $10.00.

The author stresses the physiological approach which is of special importance in dealing with endocrinopathies. Complete clinical guidance is given including symptoms and their meaning, laboratory tests and the interpretation of the findings. Full details of the treatment as well as the dangers, warnings and limitations of the use of endocrine agents are clearly brought out.

The author also emphasizes constitutional aspects and non-endocrine factors of endocrine disorders. Hormone preparations are described in tabular form including sources, biologic effects, standardization, route of administration, commercial preparations by name and manufacturer, indication for use and dosage.

There are many quick reference aids such as tables, summaries, italicized phrases and other aids.

CIVILIZATION AND DISEASE: By Henry E. Sigerist, M. D., LL. D., William H. Welch Professor of The History of Medicine in the Johns Hopkins University. Published by Cornell University Press Publishers, 124 Roberts Place, Ithaca, New York. Price $3.75.

The present book is based on a series of six Messinger lectures delivered at Cornell University and should be read and studied not only by every practicing physician but by every health officer, especially during the war.

In an interesting chapter on disease and economics the writer sets out facts which confirm the view that in any given society the incidence of disease is largely determined by economic factors, the problem of public health is not essentially a medical problem but rather a matter of political action. He shows the cost to the public of illness above mostly preventable amounts to a loss of 10 billion annually.

He explained how the low living standards, determined primarily by income level, have always been a major cause of disease. Thus, as Rudolph Virchow realized nearly eighty years ago, Dr. Sigerist makes it quite clear that the problem of public health is not essentially a medical problem but a matter rather for political action.

The second half of the book is devoted to an account of the relations between disease and history, philosophy, science, literature, art and music, and to a discussion of what civilization has done and is doing against disease.

THE CONQUEST OF BACTERIA, FROM SALVARSAN TO SULPHAPYRIDINE: By F. Sherwood Taylor with a foreword by Henry E. Sigerist, Johns Hopkins Institute of History of Medicine. Published by the Philosophical Library, 15 E. 40th St., New York. Price $2.50.

This book is a fascinating and concise account of the chemotherapeutic treatment of disease. It begins with a brief discussion of the bacterial origin of disease, recounting how the natural defenses of the body overcome bacterial invasion when it is not too overwhelming, the discovery of inoculation and vaccination and the uses of antitoxins and sera. The discovery by Gerald Dornagk of prontosil, the forerunner of all the sulpha drugs is described. The latter half of this book is taken up with the discussion of the use of these new drugs in the treatment of bacterial ailments.

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NEXT ANNUAL MEETING LEXINGTON,
SEPTEMBER 18, 19, 20, 1944

COUNTY SOCIETY REPORTS

Campbell-Kenton: The regular monthly meeting of the Campbell-Kenton County Medical Society was held at the Campbell County Health Center on May 4, 1944 with twenty-two members and four guests present. The meeting was called to order by our president, O. W. Frickman, at 8:45 P. M. Because of our distinguished guests, Dr. Oscar O. Miller, President, and Dr. P. E. Blackerby, Secretary of the State Medical Association, our President dispensed with the regular order of business.

P. E. Blackerby reported that pencillin would soon be made available for civilian use with supplies located in designated hospitals.

The program of the evening consisted of an excellent and instructive paper by Oscar O. Miller of Louisville, on "Miliary Lesions of the Lungs," illustrated with X-ray films. Dr. Miller generously offered to answer questions and a large number were asked.

The application for membership of Harry F. Mann, Walton, was referred to the Board of Censors.

There being no further business, the meeting adjourned.

Robert L. Biltz, Secretary.

Carroll: The annual meeting of the Carroll County Medical Society was held in Carrollton. Dr. H. Carl Boylen was elected Secretary-Treasurer.

H. Carl Boylen, Secretary

Carter: The annual meeting of the Carter County Medical Society was held in Grayson. The following officers were elected: President, W. H. Wheeler; Vice President, D. W. Fortune; Secretary, Don E. Wilder; Delegate, Smithfield Keffer; Board of Censors: J. W. Stovall, W. B. Bishop, Smithfield Keffer.

Don E. Wilder, Secretary.

Henderson: The annual meeting of the Henderson County Medical Society was held in Henderson. The following officers were elected: President, E. W. Sigler; Vice President, Peyton Ligon; Secretary-Treasurer, J. L. Tanner; Delegate, R. E. Smith.

J. L. Tanner, Secretary.

Henry: The regular monthly meeting of the Henry County Medical Society was held at the Castle Hotel, New Castle, March 14, 1944 at 7:30 p. m. Those present were as follows: Members: J. C. Hartman, A. P. Dowden, Maurice Bell, Wm. W. Leslie, R. J. Skidmore, A. G. Elliston, W. E. Carter, O. P. Chapman, and Owen Carroll.

Guests: Mesdames Hartman, Bell, Leslie, Skidmore, Elliston, Carter and Carroll.

William W. Leslie was host for the meeting and a delicious dinner was served. The president, J. C. Hartman, presided over the meeting and the Secretary read the minutes of the last meeting, which were approved as read.

After the business session, the meeting was turned over to Wm. W. Leslie who called on O. P. Chapman who asked all the doctors to present some interesting case they had had for discussion.

It was noted that G. E. McMunn would be host for the April meeting. There being no further business, the meeting adjourned.

Owen Carroll, Secretary.

Henry: The regular monthly meeting of the Henry County Medical Society was held at the Castle Hotel, New Castle, at 7:30 p. m., Tuesday, April 11, 1944. Host for the meeting was G. E. McMunn, and a delicious dinner was served. Members present were as follows: Forrest Hancock, G. E. McMunn, W. E. Carter, O. P. Chapman, Otto Cubbage, J. L. Karnes, and Owen Carroll. Guests present were as follows: Mesdames Hancock, McMunn, Cubbage, Carter, Karnes, McKee and Carroll.

In the absence of the President, J. C. Hartman, F. D. Hancock presided, and the minutes of the last meeting were read and approved. The host, G. E. McMunn, said that he had invited a guest speaker who had found that he could not be present, but that he himself would like to speak on the subject "History of Forceps." His presentation of the subject was very interesting and instructive. Routine discussion followed and many questions were asked.

Announcement was made of an invitation from the Rotary Club for the Society to meet with them at 8 p. m. April 13, 1944 to hear L. E. Smith, Louisville, speak on the subject of Tuberculosis, and show several short films on that subject, and also some war pictures.

There was a short discussion of these and other topics. It was noted that the host for the May meeting would be W. B. Oldham. There being no further business, the meeting adjourned.

Owen Carroll, Secretary.

Hopkins: A dinner meeting of the Hopkins County Medical Society was held at the First Methodist Church at 6:30, May 11, 1944. The program consisted of a paper by Harvey Stone, Hopkinsville, on "Short Cuts in Obstetrics." The minutes of the last meeting were read and approved.

Those present were: Drs. C. B. Johnson, Harvey Stone, J. R. Corum, J. D. Sory, Wm. L. Moore, Wm. F. Stucky, W. L. Morse, J. E. Johnston, M. S. Veal, A. F. Finley, T. R. Finley, C. R. Morton, Wm. H. Garnier, Mr. Raymond Dixon, Outwood.

William H. Garnier, Secretary.

Jefferson: The 880th stated meeting of the Jefferson County Medical Society was held Monday evening, April 17, with 37 members and guests present. The President called the meeting to order at 8:10. The Secretary read the minutes of the previous meeting and they were approved as read.

The Secretary read an announcement of the program of the next hospital staff meeting at Nichols Hospital April 20.

The Secretary read a communication from a dietitian who is available for service. Her name and address will be furnished on request.

Motion was made and seconded, put to a vote and passed, that Dr. E. S. Frey, at his request be made an affiliate member, and he will be so notified by a letter from the Secretary.

The President announced that as chairman of the committee appointed to work out arrangements with doctors at Ft. Knox he wished to conclude the work of the committee by reading a letter from the Commanding Officer at Ft. Knox who stated that arrangements had been made with the Red Cross whereby the dependents of the military personnel, and dependents of the civilian personnel at Ft. Knox, would be referred to the Red Cross and that the list of physicians sent in would be turned over to the Red Cross who would contact them. The letter further stated that arrangements would be made to take care of these patients financially where necessary. The third group, the accidents to civilians on the highway near Ft. Knox, would be referred to physicians without going through the Red Cross.

M. G. Buckles, Chairman of the Program Committee, announced that the Committee had decided that instead of having the usual June outing, they would like to attend a staff meeting at Ft. Knox.

The President asked for discussion on three points: if the Society was in favor of a program put on by the staff at Ft. Knox; if so, the time of arrival, and means of transportation.

The President said the Program Committee would proceed with the plan to arrive at Ft. Knox at 7:30 which would mean leaving Louisville about 6:30. Among the speakers will be Dr. J. G. Sherrill.

Scientific Program: 8:25.

Essay: "Obstetrical Complications and Management." J. Harold Meyer, discussed by C. B. Gettelfinger and J. G. Sherrill.

Preliminary Report of the Committee on the Study of Infant Mortality, Margaret A. Limper, Chairman. Discussed by Annie Veach, Alice Chenoweth, F. G. Plymale, H. M. Weeter and J. H. Meyer, with closing remarks by Margaret A. Limper. Adjourned 9:20.

R. T. Hudson, Secretary.

Letcher: The Letcher County Medical Society held its regular meeting in the reception room of the offices of Drs. Bach and Pigman, Whitesburg, Tuesday, March 28, 1944. The following were present: Drs. B. C. Bach, T. R. Collier, R. D. Collins, J. E. Crawford, E. G. Skaggs, Owen Pigman, John L. Clay and R. H. McFadden.

The meeting was called to order by J. E. Crawford, Vice President. The minutes of the previous meeting were read and approved. Regular routine of business was taken up and disposed of.

John L. Cay, McRoberts, Noah H. Short, Norton, Va., and R. H. McFadden, Seco, were elected members of the Society.

Following a general discussion of the constitution and by-laws, non-attending members, present events, etc., meeting adjourned.

Owen Pigman, Secretary.

Letcher: The Letcher County Medical Society held its regular meeting in the Fiscal Court Office, Whitesburg, Tuesday, April 25, 1944. Meeting was called to order at 8:30 P. M. by T. M. Perry, president. Minutes of the previous meeting were read and approved.

No other buusiness to be transacted. It was noted that ten members and one associate member of the society were present. Those present were: Drs. B. C. Bach, E. K. Munn, Richard F. Brady, J. W. Turner, F. L. Wommack, T. M. Perry, John L. Clay, E. G. Skaggs, R. D. Collins, Owen Pigman and Lee Moore, D. D. S. E. K. Munn read an article on A. A. P. S. setting forth its relation to the A. M. A. and other medical organizations. After a discussion by the members contrasting organized medicine and Government or lay controlled medicine, stressing the value of the former to the patient, the physician and surgeon, the meeting adjourned at 10:30 P. M.

Owen Pigman, Secretary

Rockcastle: The regular meeting of the Rockcastle County Medical Society was held at the Dixie Boone Hotel, April 7, 1944, at 7 P. M., with the following present: Dr. and Mrs. R. H. Lewis; Dr. and Mrs. Walker Owens; Dr. and Mrs. J. F. Pennington; Dr. and Mrs. N. M. Garrett; Dr. and Mrs. W. E. McWilliams; Dr. and Mrs. R. G. Webb; Dr. and Mrs. T. A. Griffith and visitors, Dr. and Mrs. J. D. Sory, and Dr. and Mrs. S. G. Carr, Richmond.

Business session was called to order after a delightful dinner by the President, R. H. Lewis. Minutes of previous meetings were read and approved. The President then called for the paper of the evening. R. G. Webb, Livingston, responded with a paper on Sulfa Drugs and Penicillin. This paper proved to be very interesting due to the fact that the Doctor in his introductory went back to 1906 when he began the practice of medicine and noted events in his life, and with the great strides made in medicine during all this period and up to his subject.

Discussions were opened by Walker Owens and closed by J. D. Sory, Richmond, head of the Trachoma Hospital.

S. G. Carr, Richmond, and T. A. Griffith, Mt. Vernon, each covered all the different sulfa drugs, with interesting comments on their uses and abuses.

J. F. Pennington, W. E. McWilliams, N. M. Garrett and R. H. Lewis all had comments on the paper and the uses of the drug in their work.

The Woman's Auxiliary was organized by Mrs. S. G. Carr, Richmond with 13 members. W. E. McWilliams, Brodhead, announced that he was leaving our society and county for Lexington. The society voted its regrets in losing the good Doctor and his wife.

There being no further business, meeting adjourned, with all members thanking J. D. Sory and S. G. Carr for being with us and asking that they return again soon.

R. G. Webb, Secretary.

Scott: The Scott County Medical Society was called to order by the President, L. F. Heath, at the John Graves Ford Memorial Hospital with the following members present: Drs. E. C. Barlow, A. F. Smith, G. M. Jewell, L. F. Heath, P. H. Crutchfield, S. S. Ammerson, M. D. Sanford, W. S. Allphin, H. V. Johnson and Dr. Roberts.

After a delightful dinner served by the Hospital, minutes of previous meeting were read and approved.

The Chair then called on E. C. Barlow, who in well chosen words introduced three members of the Scott County Medical Society, who graduated at the Kentucky School of Medicine fifty-one years ago, and with one exception, all three have practiced in Scott County ever since. These men are Drs. M. D. Sanford, Sadieville, D. B. Knox, Georgetown and P. H. Crutchfield of Stamping Ground. P. H. Crutchfield practiced out of the County his first ten years, but has been here since 1903. M. D.

Sanford and D. B. Knox roomed together in Medical School and both came to Scott County at the same time.

The guest speaker of the day was Dr. Alice Chenoweth, Louisville, representing the Bureau of Maternal and Child Health, who gave us a very interesting and instructive talk on the work and function of this Board and how the Hospitals and Doctors can cooperate. After a round table discussion of this topic, the meeting adjourned to meet again the first Thursday in June.

H. V. Johnson, Secretary

Shelby: The regular meeting of the Shelby County Medical Society was held on April 27, with Maurice Bell as host. The following members and guests were present: Maurice Bell, A. P. Dowden and G. E. McMunn, Eminence; H. B. Blaydes, La Grange; H. T. Alexander, Crestwood; J. B. Mack, Pewee Valley; B. B. Sleadd, Middletown; H. H. Richeson, Louisville; M. H. Skaggs, A. C. Weakley, W. H. Nash, C. C. Risk, W. P. Hughes, W. E. Morris and T. J. McMurry, Shelbyville; J. B. and Lanier Lukins, guests from Louisville.

After a delicious chicken dinner, served at the Colonel Inn, the meeting was called to order by the President, H. M. Blaydes. The minutes of the previous meeting were read and approved. At this time the President turned the meeting over to the host, Maurice Bell, who introduced J. B. Lukins, Louisville, who read a very interesting paper on "Pain in the Right Lower Quadrant of the Abdomen." The following members discussed the paper, Drs. Bell, Lanier Lukins, Hughes, Richeson, Alexander, Nash, Mack, McMurry, Weakley, Sleadd, Skaggs and Blaydes.

The Secretary read a letter from J. S. Furnish, Taylorsville, offering his resignation as a member of this society.

A motion was made to adjourn. The next meeting will be on May 25, when Dr. Blaydes will be the host.

C. C. Risk, Secretary

Union: The Union County Medico-Dental Society met in the office of the Union County Health Department at Morganfield, at 8:00 P. M., Tuesday, May 2, 1944. A medical film on "War Burns of the Hands" was shown. A general discussion was held after the showing of the picture. The following members were present: H. E. Cottingham, D. L. Vaughn, G. B. Carr, J. W. Conway, H. B. Stewart, C. B. Graves, T. P. Gray, D. M. Sloan, A. D. Bailey, Bruce Underwood.

Bruce Underwood, Secretary.

NEWS ITEMS

Dr. Edward Davenport, Hopkinsville was elected Vice President of the Christian County Medical Society on April 18, 1944, replacing the recently deceased Dr. W. S. Sandbach.

E. Elliot Otte was elected President of the Cincinnati Sanitarium to succeed the late Harry P. Collins, who served as President of the medical institution for 38 years. For the last 15 years Otte has been vice-president of the Sanitarium. This sanitarium has been advertising in the Journal for thirty years.

BOOK REVIEWS

MINOR SURGERY: By Frederick Christopher, S. B., M. D., F.A.C.S., Associate Professor of Surgery at Northwestern University Medical School, Chicago; Chief Surgeon at the Evanston (Ill.) Hospital. Fifth Edition, Reset. 1006 pages with 575 illustrations. Philadelphia & London: W. B. Saunders Company, 1944. Price $10.00.

The fifth edition of this volume is timely especially since war and industry contribute to need of skill in minor surgery. In this book are considered the pathogenesis, diagnosis and treatment of those conditions which comprise the large majority of surgical affections. Included is the surgery of the general practitioner, of the physician who does not have ready access to a large hospital or contact with surgical specialists, of the physician who has been unable to serve the prolonged apprenticeship.

The entire volume has been thoughtfully revised, many sections have been entirely rewritten and many new ones added. There are many illustrations.

YEAR BOOK OF INDUSTRIAL AND ORTHOPEDIC SURGERY: Edited by Charles F. Painter, Orthopedic Surgeon to the Massachusetts Women's Hospital and Beth Israel Hospital, Boston. The Year Book Publishers, Incorporated, 304 South Dearborn St., Chicago, Price $3.00.

This book gives a complete yet concise review of all the new advances in industrial and orthopedic surgery. It is well illustrated, many times showing numerous pictures delineating various important steps in operative technic. Several important chapters are given regarding the problems of organization and the war, also regarding specific hazards in war industries. It is of convenient size for ready reference.



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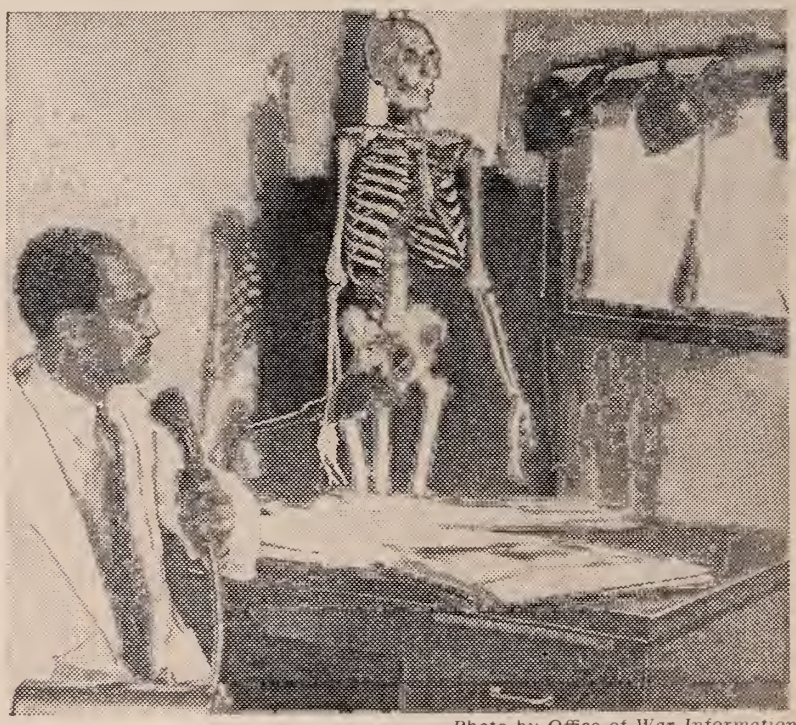


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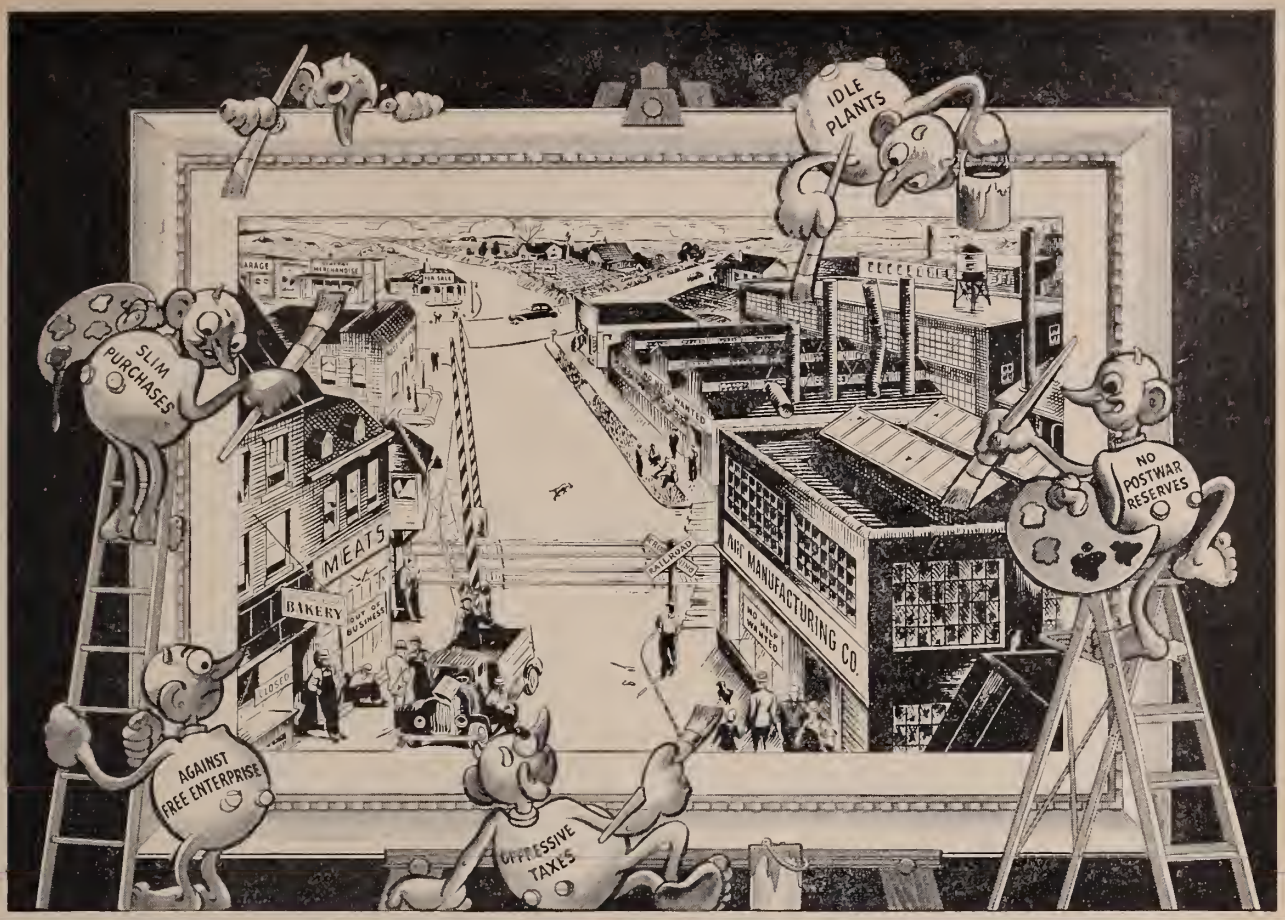
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"*Better yet, my doctor knows that in S-M-A he's prescribing an infant food that closely resembles breast milk in digestibility and nutritional completeness!*

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. . . IF IT'S AN SMA BABY!"

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Many hay-fever sufferers experience aggravation of symptoms during the pollinating season because of house dust sensitivity. "HOUSE DUST EXTRACT *Lederle*" is available for diagnosis and desensitization.

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● New reprint available on cigarette research — Archives of Otolaryngology, March, 1943, pp. 404-410. Camel Cigarettes, Medical Relations Division, One Pershing Sq., New York 17, N.Y.



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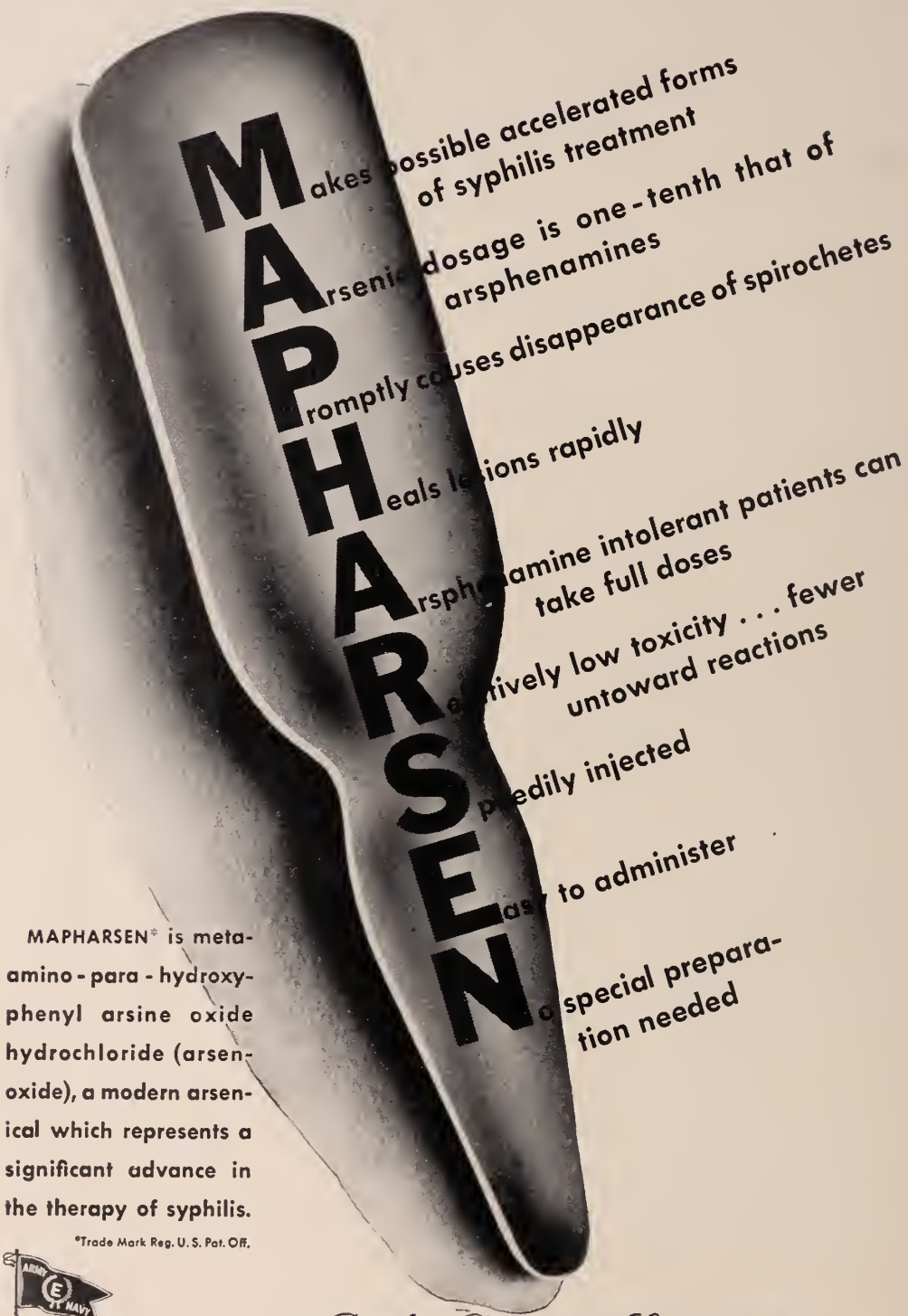
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* Commenting editorially on the work of Mills and Cottingham (J. Immunol. 47:503 [Dec.] 1943), THE JOURNAL states: "They found that after five and one-half weeks maintenance at 68 F. rats showed a maximum phagocytic activity on diets containing 18 per cent of protein. There was a definite decrease in phagocytic activity with an increase or decrease from this level. In rats maintained at 90+F. the phagocytic optimum diet was 36 per cent of protein. Thus adequate protein intake would seem to be fully as important as adequate vitamin intake to maintain optimal phagocytic activity (resistance to microbic infections). The immunologic optimum protein intake is higher in the tropics than in temperate climates. . . . This demonstration of important variations in phagocytic functions is a pioneer contribution to basic immunologic theory and may have wide clinical implications." (J.A.M.A. 124:1203 [April 22] 1944.)

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Allen	A. O. Miller	Scottsville	July 26
Anderson	J. B. Lyen	Lawrenceburg	July 3
Ballard	F. H. Russell	Wickliffe	
Barren	C. R. Markwood	Glasgow	July 19
Bath	H. S. Gilmore	Owingsville	July 10
Bell	Edward S. Wilson	Pineville	July 14
Boone	R. E. Ryle	Walton	July 19
Bourbon	George M. Jewell	Paris	July 20
Boyd	Price Sewell, Jr.	Ashland	July 4
Boyle	P. C. Sanders	Danville	July 11
Bracken-Pendleton	W. A. McKenney	Falmouth	July 27
Breathitt	M. E. Hoge	Jackson	July 18
Breckinridge	J. E. Kincheloe	Hardinsburg	
Bullitt	George B. Hill	Mt. Washington	
Butler	D. G. Miller, Jr.	Morgantown	July 5
Caldwell	W. L. Cash	Princeton	July 4
Calloway	J. A. Outland	Murray	
Campbell-Kenton	Robert L. Blitz	Newport	July 6
Carlisle	E. E. Smith	Bardwell	July 4
Carroll	H. Carl Boylen	Carrollton	July 11
Carter	Don E. Wilder	Grayson	July 11
Casey	Wm. J. Sweeney	Liberty	July 27
Christian	H. B. Stone	Hopkinsville	July 18
Clark	W. Carl Grant	Winchester	July 21
Clay	L. H. Wagers	Manchester	
Clinton	S. F. Stephenson	Albany	July 15
Crittenden	C. G. Morelsnd	Marion	July 10
Cumberland	W. F. Owsley	Burkesville	July 5
Daviess	Frank J. Condon	Owensboro	July 11 & 25
Estill	Virginia Wallace	Irvine	July 12
Fayette	Charles D. Cawood	Lexington	July 11
Fleming	Roy Orsburn	Flemingsburg	July 12
Floyd	Robert Sirkle	Weeksbury	July 26
Franklin	E. K. Martin	Frankfort	July 6
Fulton	John G. Samuels	Hickman	July 12
Gallatin	J. M. Stallard	Sparta	July 20
Garrard	J. E. Edwards	Lancaster	July 20
Grant	Wallace Byrd	Williamstown	July 19
Graves	H. H. Hunt	Mayfield	July 11
Grayson	E. B. Deweese	Caneyville	
Green	S. J. Simmons	Greensburg	July 3
Greenup	Virgil Skaggs	Russell	July 14
Hancock	F. M. Griffin	Hawesville	July 3
Hardin	D. E. McClure	Elizabethtown	July 13
Harlan	W. R. Parks	Harlan	July 15
Harrison	W. B. Moore	Cynthiana	July 3
Hart	Vinson Corrao	Munfordville	July 4
Henderson	Walter L. O'Nan	Henderson	July 10 & 24
Henry	Owen Carroll	New Castle	July 13
Hickman	H. E. Titsworth	Clinton	July 6
Hopkins	Wm. H. Garnier	Madisonville	July 13
Jefferson	Richard T. Hudson	Louisville	
Jessamine	J. A. VanArsdall	Nicholasville	July 20
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Lee	A. B. Hoskins	Beattyville	July 8
Letcher	Owen Pigman	Whitesburg	July 25
Lewis	Elwood Esham	Vanceburg	July 17
Lincoln	Lewis J. Jones	Hustonville	July 21
Livingston	T. L. Radcliffe	Smithland	
Logan	E. M. Thompson	Russellville	
Lyon	H. H. Woodson	Eddyville	July 4
McCracken	Leon Higdon	Paducah	July 26
McCreary	R. M. Smith	Stearns	July 3
McLean	F. L. Johnson	Livermore	July 13
Madison	F. M. Melton	Richmond	July 20
Magoffin	Lloyd M. Hall	Salyersville	
Marion	Nelson D. Widmer	Lebanon	July 25
Marshall	S. L. Henson	Benton	July 19

COUNTY	SECRETARY	RESIDENCE	DATE
Mason	C. W. Christine	Maysville	July 12
Menifee	E. T. Riley	Frenchburg	
Mercer	J. Tom Price	Harrodsburg	July 11
Metcalfe	E. S. Dunham	Edmonton	
Monroe	Geo. E. Bushong	Tompkinsville	
Montgomery	D. H. Bush	Mt. Sterling	July 11
Muhlenberg	E. L. Gates	Greenville	July 11
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Nicholas	T. P. Scott	Carlisle	July 17
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Owen	K. S. McBee	Owenton	July 6
Owsley	W. H. Gibson	Booneville	July 3
Perry	J. P. Boggs	Hazard	July 10
Pike	S. B. Casebolt	Pikeville	July 6
Powell	I. W. Johnson	Stanton	July 3
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Russell	J. R. Popplewell	Jamestown	July 10
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Spencer	M. H. Skaggs	Taylorsville	
Taylor	L. S. Hall	Campbellsville	July 6
Todd	B. E. Boone, Jr.	Elkton	July 5
Trigg	Elias Futrell	Cadiz	July 11
Union	E. Bruce Underwood	Morganfield	July 4
Warren-Edmonson	Paul Q. Peterson	Bowling Green	July 12
Washington	J. H. Hopper	Willisburg	July 19
Wayne	Frank L. Duncan	Monticello	
Webster	C. M. Smith	Dixon	July 28
Whitley	C. A. Moss	Williamsburg	July 6
Wolfe	John L. Cox	Campton	July 3
Woodford	George H. Gregory	Versailles	July 6

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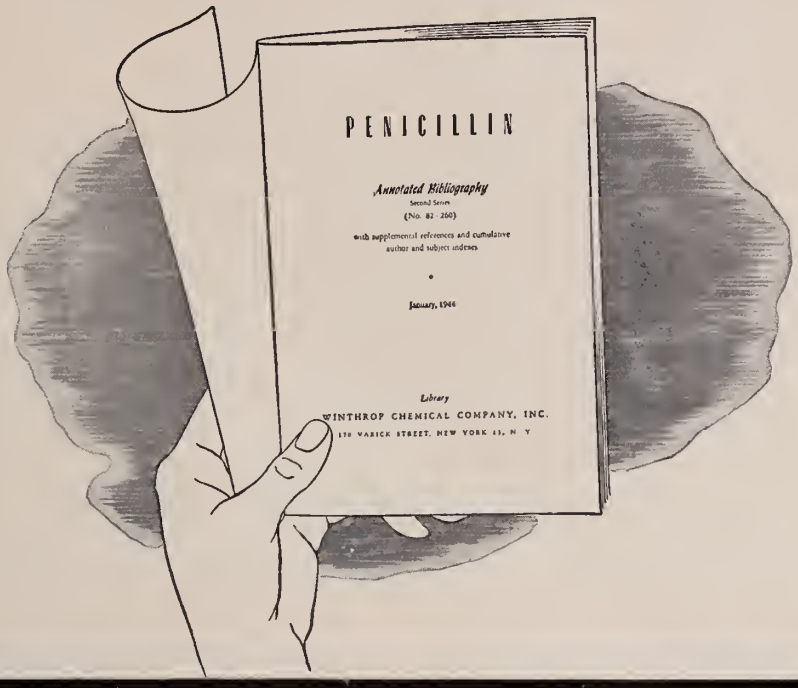
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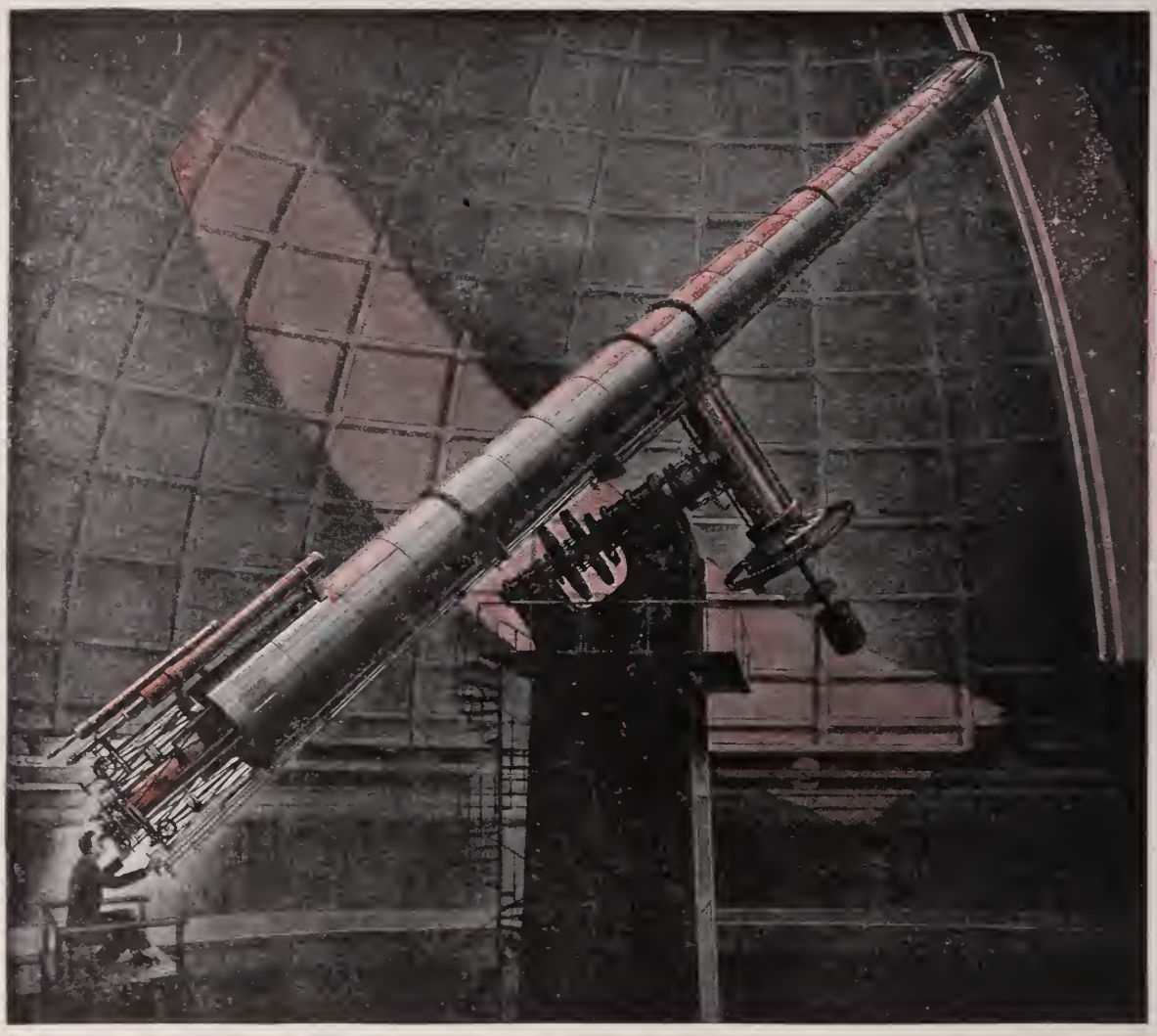
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KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

Published Under the Auspices of the Council

VOL. 42, No. 7 BOWLING GREEN, KY. JULY, 1944

WAR'S IMPACT ON MEDICAL PROFESSION OF KENTUCKY

In the last issue of the Journal was published, under the title, Honor Roll, a list of Kentucky physicians in the Armed Services, World War II. It will be noted that there are approximately 550 of our physicians in active service. This leaves on the home front capable of active practice approximately 1700 physicians, or a ratio of one physician to each 1600 of population. It would not be wide of the mark to assume that, if evenly distributed, this ratio would provide reasonably adequate care for all the people, but such is not the case. The ratio in some rural sections comes as high as one to 10,000 population; in far too many instances, the ratio is one to more than 3,000 population.

Fortunately, there has been no serious outbreak of any communicable disease, and other illnesses have deviated very little from what would be expected in normal times. However, when we consider that there is in the urban centers a very high percentage of physicians in specialized services, thus reducing the number of physicians available for general practice, we can understand that it is the physicians of the latter class who are having to bear the brunt of the war's impact.

The general practitioners in both urban and rural sections are meeting their responsibility with the courage of soldiers, but, in too many instances, physicians are working beyond their endurance. Too many have already become casualties of war.

Procurement and Assignment Service for physicians has, on the whole, done a good job, but, in some instances, there has been overzealousness in securing quotas. This is probably true in Kentucky, since we note that, in comparison with some of the States, particularly in the East and the West, our doctors have responded voluntarily or by selection in an extraordinary way. A careful survey of the situation now in Kentucky leaves but a very minimum, if any physicians, who could be spared.

It was thought that Procurement and Assignment would serve satisfactorily in securing relocation of physicians for replacement of commissioned men, but some civilian physicians above the army age could not afford to make the change. While it was true that many relocations have been influenced by Procurement and Assignment, most of them have been voluntary and out of personal interest. There have been more than 100 removals and relocations since January, 1942. The Federal Act providing subsidy for the first three months for physicians relocating has served very little purpose and will probably not continue after July 1, 1944. Making money available for relocation does not necessarily make physicians available.

Not only has a general shortage (acute in many cases) of general practitioners for medical supply resulted, but there has been a corresponding influence upon some of the specialties. The Editor frequently hears of this or that surgeon having to work overtime while giving of his time and effort in furthering public and professional affairs. Most of these physicians (medical and surgical) are above fifty years of age, but to warn them against overwork seems to fall upon deaf ears because they are first, so strongly humanitarian, and second, are peers of any in patriotism.

The medical schools, the hospitals, and all health agencies have also felt the impact of war on the supply of physicians, and here again those remaining on duty are courageously trying to keep programs going successfully, even though it requires extraordinary expenditure of time and energy.

DR. VIRGIL EARL SIMPSON
1875 - 1944



Dr. Virgil Earl Simpson suddenly collapsed and died at the close of an address on the Wagner-Murray-Dingell Bill, before the First District Nurses' Association, Henry Clay Hotel, May 3, 1944, at 9:00 P. M. As Chairman of the Committee on Medical Economics of the Jefferson County Medical Society, former Chairman of the Committee on Medical Economics of the Kentucky State Medical Association and as a delegate to the American Medical Association for many years, Dr. Simpson was probably more familiar than any other man in the State with the provisions of the proposed legislation, of which he strongly disapproved. His death in such distressing and tragic circumstances deeply shocked his colleagues, his many personal friends and the community at large.

He graduated with a degree of A. B. from the University of Louisville and in 1900 received his M. D. degree from the Louisville Hospital School of Medicine, two years later joining the faculty of this institution as instructor in Pharmacology and Therapeutics and subsequently becoming, in turn, Associate Professor and Clinical Professor of Medicine. A former President, Secretary and Treasurer of the Jefferson County Medical Society, Dr. Simpson was a diplomate, with special certification in Gastroenterology, of the American Board of Internal Medicine; a member of the Kentucky State Medical Association, the Southern Medical Association, the American Heart Association, the American Gastroenterological Association and a Fellow of the American College of Physicians. For several years he served in the House of Delegates of the American Medical Association as a member of the Revision Committee of the United States Pharmacopoeia.

Dr. Simpson was a member of the staffs of the Louisville City Hospital, Norton Memorial Infirmary, Kentucky Baptist Hospital, St. Joseph's Infirmary and the Kosair Hospital for Crippled Children. During World War I Dr. Simpson was a Major in the Medical Corps, U. S. Army, and was Commanding Officer of Company Hospital No. 8 in Montigyn-le-Roi, France.

No member of the medical profession of Kentucky worked more unselfishly, tirelessly and unceasingly in behalf of organized medicine or contributed more to its progress.

He was probably the most consistent member in attendance at the Kentucky State Medical Association. He always took an active part in the House of Delegates of the Association and at the Scientific Sessions he discussed papers with the vim of an orator. His report of the meetings of the House of Delegates of the American Medical Association was classic. The profession also always waited with eager interest his report of his work on the revision of the U. S. Pharmacopoeia.

Dr. Simpson was the author of many widely publicized papers and reports and wrote extensively for the Annals of Internal Medicine.

Dr. Simpson was especially gifted as a teacher, inspiring his students to perfect themselves in the knowledge of their profession and to be satisfied with nothing less than perfection. Often strangely reticent, immersed in his profession, intolerant of mediocrity and complacency, constant study and research became habits which he maintained to the very end.

The courage manifested by Dr. Simpson in all of his public and professional relations and his industry on behalf of organized medicine will be greatly missed. He never asked anything of others which he, himself, could not sustain and his memory will be cherished in his profession throughout the years.

OUR PROFESSION HONORED

Dr. James A. Ryan, prominent surgeon of Covington, Kentucky, First Vice-President of the Southern Medical Association, succeeded to the Presidency following the death of President William Turner Wootten, Hot Springs, Arkansas, on May 2, 1944. The profession of Kentucky was highly honored when Dr. Ryan was made Vice-President. His selection was applauded by his many professional friends, and the profession of the South is fortunate to have a physician of his character and professional attainment to assume the responsibility of the Presidency. Dr. Ryan has always been held in high esteem by Kentucky doctors, as is evidenced by the fact that he was selected to represent the profession as General Chairman for the entertainment of the Southern Medical Association in 1943, at its session in Cincinnati, which was sponsored by the Campbell-Kenton County Medical Society.

We are proud that Kentucky will be represented so ably in this distinction.

DOCTOR DRAFT MAY ENDANGER U. S. HEALTH

Dr. James E. Paullin, retiring president of the American Medical Association, warned recently against "an alarming situation" in medicine, seriously threatening the public health, because so many doctors are in the Armed Forces and it is difficult to obtain draft deferments for pre-medical students.

"In age groups over 45," he pointed out, "there are now more deaths among doctors than statistics would lead us to expect—simply because of the excessive strain placed upon these doctors by today's difficult times. Today, with more than 60,000 doctors in the Armed Forces and with the Army and Navy taking more than half of the new graduates each year, an alarming situation has developed which in the future, may seriously threaten the public health. About 3,600 doctors are entering the armed services annually. There is an annual deficit each year of at least 2,200 doctors, because the vacancies created in medical ranks by death or forced retirement from practice because of age or illness cannot be filled. The reason for this lies in the difficulty of deferring pre-medical students, and in keeping our classes filled with otherwise draft-exempt men or with women."

ORIGINAL ARTICLES

MILIARY LESIONS IN THE LUNG

O. O. Miller, M. D.
Louisville

As a basis for the concept of miliary lesions of the lung we might briefly consider the unit of the lung, the lobule (1) "which consists of several air cells arranged around the termination of a bronchiole and surrounded by six plexuses of pulmonary and bronchial arteries and veins, lymphatics and nerves, pyramidal in form with base outwards and about 1/12 inch in diameter. The alveolar ducts lead to the alveoli or air cells which are separated from each other by thin septa lined with cuboidal epithelium on a basement membrane and vary in diameter from 1/200 to 1/70 of an inch." These anatomic components must of necessity enter into the pathological picture and probably form the units that make up the miliary lesions observed in the roentgenogram. In severe pulmonary hemorrhage, especially in tuberculosis, it is quite common to observe mottling in the contralateral lung due to flooding the alveolar ducts or alveoli with blood, which later coagulates, and occludes the ducts or bronchioles to produce lobular atelectasis. Such densities may be considered as intrinsic in their relation to the lobule.

Similarly in diffuse broncho pneumonia such atelectases occur to form a similar picture; and in like manner congestion, in cardiac decompensation.

In acute interstitial pneumonia (2) the associated bronchiolitis may be so intense as to cause these to become permanently cicatrized producing a condition spoken of as bronchiolitis fibrosa obliterans; this on the roentgenogram appears as miliary densities throughout the involved areas of the lung.

Lipid pneumonias represent a type where involvement is lobular in distribution involving the bronchioles and alveoli.

In other words any irritant such as chlorine, ammonia, the war gases, refrigerator gases, may lead to a bronchopneumonia with the characteristic miliary mottling involving the anatomic lobule, the bronchiole, the alveolar duct, the alveoli. We may accept miliary tuberculosis of the lungs as a standard of comparison and a point of departure for the consideration of all miliary lesions.

We now come to the consideration of

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miliary densities which are primarily extrinsic to the alveolus, and only involve this secondarily and by contiguity. We may accept as axiomatic that the final resting place for all tubercle bacilli irrespective of the route of entry is lymphoid tissue. In those organs and tissues where lymphoid tissue is sparse or not ordinarily found such as the liver and the cornea of the eye, then the bacilli come to rest in the interstices where lymphoid tissue is ordinarily found. Miller (3) and Krause state, "We have never observed tubercle developing from proliferation of the intima nor in the vessel lumen." Miller (4) in a study of the lungs of a negro, says, "the tubercles can be traced to a place where lymphoid tissue is present in the normal lung." The fusion of microscopical tubercles results in the formation of the miliary tubercles, which Miller prefers to call conglomerate tubercles. It is during this fusion that blood vessels, lymph vessels and alveoli become incorporated in the mass and the adjacent alveoli exhibit an exudative alveolitis or bronchiolitis or not infrequently emphysematous dilatation.

In silicosis, secondary stage, we observe classical nodulation from 2 to 5 mm in diameter in the periphery of the lung involving all parts except the costo phrenic angles. McCann (5) speaks of the nodules as being in the walls of the alveolus associated with perivascular and perilymphatic fibrosis. Gardner (6) says "the location of the silicotic nodules is not easy to determine; they seem to have started in the walls of the air spaces, however reconstruction in wax from serial section reveals that practically all of them are associated with the branches of the pulmonary artery." Lemon and Higgins (7) in their experimental investigation of the formation of the silicotic nodule in rabbits, noted that the central portion of the nodule was composed of the remnants of alveolar walls, debris, erythrocytes, polymorphonuclear leucocytes and mononuclear cells. They call attention to its peribronchial situation, its central zone of exudate and the outer concentric rings of histiocytes.

The roentgenogram in the classical second stage silicosis exhibits small discreet nodulations uniformly distributed throughout both lungs with the exception of the costo phrenic angles. The densities are uniform in size, rarely exceed 4 mm in diameter and never exceed 6 mm in diameter.

The root shadows are very heavy and dense early in the disease, but later show a tendency to become narrow and contracted. When secondary infection supervenes the nodulation is less sharply defined; localized conglomeration occurs to form dense massive shadows usually in the upper half of the lung, unilateral or bilateral, which are usually the result of tuberculous infection. Benign hematogenous tuberculous infection is usually given first consideration whenever miliary densities are observed in the X-ray film. These vary in size from pin point densities to areas 10 mm in diameter dependent on the age of the lesion, and the massiveness of the infection. Usually one or both roots may be markedly exaggerated, especially so when occuring in children and young adults, although roots of normal density are occasionally seen. The lesion shows a tendency to clear rapidly. The patients are usually symptom free, the Mantoux tuberculin test is negative in 50% of the cases. The usual sequence of events is for the perifocal inflammatory reaction to clear within a few weeks, to be succeeded in a variable number of months, usually about 12, by a pin point area of calcification within the center of the nodule, associated with a contraction of the lesion due to the concomitant fibrosis in the capsule. In course of time the calcification increases, until it finally replaces the whole of the central area of the original density; the roentgenograms at this point show more or less uniform miliary areas of calcification throughout both lungs. Such miliary lesions are frequently observed, which have been predominantly unilateral and occasionally lobar in distribution; they may be discreet or intensely diffuse.

Boeck's Sarcoidosis is another condition in which miliary densities or nodulation are scattered throughout both lungs, associated with very heavy root shadows. These cases are easily confused with hemotogenous tuberculosis, especially in the absence of the characteristic skin nodules and cystic changes in the metacarpal bones. Boeck's Sarcoidosis is more likely to occur in adults, particularly the negro race whereas hematogenous tuberculosis finds a somewhat greater incidence in children.

Pyemia may lead to miliary abscesses throughout the lung, which on gross section simulates miliary tuberculosis exquisitely; microscopic examination reveals

the lesion in its true pathological setting. Similarly miliary carcinomatosis produces densities in the X-ray which are indistinguishable from miliary tuberculosis and even at autopsy the appearance is such that differentiation is improbable without recourse to microscopical section. In chronic lymphatic leukemia lymphoid nodules may appear in the lungs as elsewhere to form miliary densities.

The diffuse infiltration of tissue that occurs in myelogenous leukemia may lead to miliary densities in the lungs when such pulmonary leukemic infiltration occurs.

Lipid pneumonia is another condition that shows miliary densities throughout the lungs, particularly the bases. I am of the opinion that histoplasmosis may show miliary densities early in the disease before the densities have coalesced to form the larger lobular like areas that are usually observed in this condition. We have records on two cases of blastomycoses that exhibit miliary densities through out both lungs. These are usually secondary to skin and bone lesions.

Certain other fungi may cause miliary lesions in the lung. I have seen cases purported to be due to non pathogenic aspergillus and another case with a lobar distribution of miliary densities from which monilia was recovered; both cleared on iodide therapy. Periarteritis nodosa has been appearing in the literature with increasing frequency and is another condition to be considered in nodular lesions in pulmonary tissue. It is manifest that many conditions may lead to miliary densites in the lungs. Austrain (8) and Brown mentioned twenty two states in which these may occur. From this it is evident that the x-ray is an invaluable and indispensable aid in uncovering unsuspected pulmonary lesions, their correct interpretation however offers numerous diagnostic pit falls to the unwary and emphasizes the necessity of correlating all the laboratory and clinical data to aid in their elucidation.

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NEUROVASCULAR LESIONS OF THE EXTREMITIES

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The subject of neurovascular lesions of the extremities is one that has interested me for a number of years. A special clinic for the study and treatment of this group of patients was established at the Massachusetts General Hospital in 1928. Staff members interested were assigned to this study as a result of which these patients received better treatment and we learned something of value in this group of cases, as well as to ourselves. Many articles on the subject in its many ramifications have been published. In spite of the pressure of war, special attention has continued in this assignment under the direction of Dr. L.S. McKittrick. In addition to his contributions to the subject, those of Drs. J. C. White, R. H. Smithwich, H. H. Faxon, R. R. Linton, and C. E. Welch are worthy of special mention. All are a part of the original group that studied this problem under my direction for a period of ten years.

The whole subject is a broad one and includes all peripheral diseases whether they be due primarily to the influence of the sympathetic nervous system or primarily to the vascular system itself. Complicating infections and gangrene found associated with arteriosclerosis, diabetes mellitus or inflammatory lesions of the vessels as well as abnormalities of the vessels, were included in our assignment. That most of these disorders are, in a way, influenced by the autonomic nervous system makes it possible for me to present you with a general discussion of many of these problems.

Vasomotor imbalance is best illustrated by the phenomenon usually called "Raynaud's disease." This entity manifests itself in many stages. The earliest and mildest is represented by periodic multiple phase color changes in the digits. These reactions are brought on by exposure to cold, to stress, or emotional stimulation. The identical fingers of both hands are most commonly affected. Actually only the distal phalanx of one finger on each hand may be the only manifestation of disease. The attacks may come several times daily or days apart or only trouble

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the victim in cold or damp weather. Often several symmetrical digits are involved as well as the tips of the nose and ears. Many times the process never develops beyond this slightly inconvenient, transient disturbance and may, in fact, disappear entirely.

From this mild phase of sudden cyanosis followed by blanching and then the rubor of hyperemia, we often see a more severe form of the process of vasoconstriction followed by vasodilation. The constricting influence may last longer as the disease progresses with resulting interference with the nutrition of the very tip of the fingers involved. This leaves small areas of necrosis with resulting scar tissue that often is painful and tender most of the time. The process may reach a constant phase in which the digits remain cyanotic, swollen, and painful. Repeated necrosis produces fibrosis in the tissues and thus destroy by pressure the small blood vessels carrying nourishment to the part. Slow, gradual absorption of the bony elements of the terminal phalanx involved may take place without actual gangrene. The constant state of cyanosis has frequently been referred to as "acrocyanosis" and that of bony absorption as "sclerodactylia." These terms are merely descriptive of late phases of vasomotor imbalance that are occasionally seen.

Sir Thomas Lewis investigated this subject extensively and was of the opinion that the true fault was in the nutrient blood vessels themselves and not secondary to vaso-spasm. J. C. White in our clinic made some very convincing research in this field and has shown conclusively that the phenomena originate in the sympathetic nervous system. The vessels in the affected parts in the mild or early cases are normal. After tissue damage around the vessels progresses to fibrosis or necrosis, the vessels become secondarily involved.

This interesting malady affects women more often than men. Young people more commonly have this disturbance, although we have seen it begin many times at the menopause and often quite late in life. The symmetry of true Raynaud's disease makes it easy to distinguish from the symptoms of cervical rib or the scalenous anticus syndrome. Both of these latter disorders almost invariably affect only one side. In primary vasomotor imbalance, one also finds the toes affected as well as the fingers in nearly every case. Less is said about the toes because they are covered most of the time and, in fact, less complaint regarding mild symptoms in the fingers would be made if they were not so regularly exposed to view.

If one can successfully interrupt the sympathetic fibers to an extremity that is involved in a peculiar vasomotor disturbance, one can eliminate the ability of the vessels to constrict and therefore eliminate the ability to produce this painful syndrome.

When a cross section of normal artery is studied under the microscope, one finds the characteristic thin adventitia on the outside, the elastic "media" making up most of the total thickness of the wall, and the thin endothelial lining or intima. This is the sort of artery that one sees in Raynaud's disease in the early stages. Therefore, we do not believe that Raynaud's disease can be primarily dependent on a fault in the blood vessel itself. As the disease progresses, however, one may find fibrosis in the tissues, with constriction of the blood vessels, and still the blood vessels themselves will have comparatively normal walls.

Thrombo-angitis obliterans is a term applied to a serious and characteristic entity affecting the blood vessels of the extremities. Leo Buerger first accurately worked out this pathological process and it is often referred to as "Buerger's disease." It is a disease which affects young men. Although it is frequently reported to have been seen in women, we have never seen a single instance in the female sex and for some reason, the only race that seems to be exempt from this malady is the colored race. Although some of my Southern friends tell me they believe they have seen it in the negro, actually when questioned there seems to be some doubt about it. This is a particularly fulminating disease, dependent not on the vasomotor system but on the gradual occlusion of the blood vessels supplying the part. The etiology is not known. The veins as well as the arteries are thrombosed, and it is a very difficult disease to cure and is very painful. These people will become addicts to morphine if they get a chance.

The type of blood vessel seen in such a patient shows the entire lumen, with the exception of small areas of recanalization, occluded by firm, fixed, organized thrombus. This is characteristic not only of the artery but of the vein as well. As you know, the sensory nerves lie very close to the artery and the vein in the so-called neurovascular bundle, and we believe the

inflammatory process that goes on in the blood vessels secondarily involves the nerve as well. This nerve pressure brings about the terrific discomfort and pain that these individuals endure.

It is not uncommon to see this disease progress in spite of any treatment. One extremity after another is involved and after years of invalidism and repeated amputations, the victim finally succumbs to involvement of the coronary, or cerebral vessels. Much, however, has been accomplished in the management of this disorder. Pain may be eliminated by the crushing of sensory nerves supplying the affected parts. Collateral circulation can be enhanced by active exercises, by the Pavex or passive vascular occlusion apparatus. Patients with this disease should give up tobacco, since nicotine is a vasoconstrictor. Elimination of the vasoconstrictor influence by lumbar sympathetic denervation, will retard recurrent flares of the process.

Diabetes Mellitus is associated with a more rapid development of arteriosclerosis than comes about normally. Dr. Elliott Joslin has said that we should add the patient's age to the number of years he has had diabetes to estimate the true age as far as the circulation is concenrned. For this reason, we see rather advanced arterial obliteration in comparatively young people with diabetes. Also, we find some non-diabetics with an early type of arteriosclerosis. These younger people, averaging in age around 50 years, will have arteries that on cross section are thickened in the media. A fibrosis, with, at times, actual bone deposit takes place which encroaches on the lumen of the vessel. This type of arteriosclerosis has been described by Monkeberg and his name is often attached to it. Pathologists differ in their support of this type of arterial occlusion and many feel that it is probably a stage of the usual arteriosclerosis seen in the aged.

One must take into consideration that the diabetic loses the ability to evaluate properly the stimulation of heat, cold, and pain. For this reason, they are prone to burn their extremities without knowing it. Actually for some reason, it appears to take less heat to produce a burn on a diabetic than on a normal patient. Also, their tissues seem to become more easily infected and infection harder to cure than in the normal person. Every care should be used to protect them from burns, injuries, minor infections, etc. The diabetic with an infected toe will occupy a hospital bed for an average of twelve weeks. This group of patients require a great deal of vigilance on the part of the patient's family as well as by their physician.

Senile Arteriosclerosis is now frequently encountered in the extremity vessels of mentally active and otherwise apparently normal individuals. A section of the blood vessel shows the calcification taking place in such a manner that the intima becomes thickened and roughed so that the lumen becomes narrowed. Also, the elasticity of the vessel is lost so that vasodilation, normally seen, cannot occur in the major vessels at all.

If the main arterial supply to an extremity takes place slowly, nature gradually builds up a collateral circulation so that often we find no palpable pulses below the common femoral. This complete loss of the main channels may take place so gradually that the patient is unaware of any difficulty. Usually, however, there is a feeling of fatigue on muscular exertion and frequently these patients appear complaining of cramp in the foot or calf muscles on walking. They find that by resting a few moments, they can again walk a certain distance before the cramp returns. This phenomenon is due to oxygen lack in the muscles and is called "intermittent claudication." This condition gradually improves with proper care and when symptoms may have practically disappeared, the process may become evident in the opposite extremity. Often, we have felt that these troublesome symptoms may well protect the patient from activities that might well bring forth coronary occlusion or cerebral hemorrhage. For these reasons, it may be well to consider the danger of too quickly improving the situation in the legs by lumbar ganglionectomy.

Gangrene of the extremities in arteriosclerosis rarely takes place in an individual who has gradual occlusion of the main arteries. Nature often keeps pace with the process so that adequate collateral circulation develops by the time the pulses are lost. The arteriosclerotic, who continues to have patent vessels, is the one in danger of gangrene. If these vessels become rapidly occluded by thrombosis then gangrene almost invariably takes place. This is particularly true in the arteriosclerotic popliteal aneurysm that becomes suddenly thrombosed. It is best to sympathectomize and operate on the arteriosclerotic aneurysm of the popliteal artery as soon as it is discovered.

If one will elevate the extremity of a patient with obliterative arterial disease

TABLE OF DIFFER ENTIAL DIAGNOSIS

	Vasomotor Disturbances	Thrombo-angiitis obliterans	Monckeberg's arteriosclerosis	Senile arteriosclerosis
Average	30	40	50	60
Sex	Female	male	male	Both
Nationality	all	all except negro	all	all
Duration of Symptoms	years	years	months	months
Extremity	upper	lower	lower	lower
Symmetry	bilateral	one side at a time	unilateral	unilateral
Gangrene	late	late	early	early
Pulsating vessels	normal	none	none	faint or none
Vessels by X-ray	no	no	no	yes
Response to Foreign Protein	marked	marked	slight	slight
Response to Novocaine Block	rapid and marked	slow and mild	slight	slight
Development Collateral Circulation	none	good	slight	good

to 45 degrees, a marked blanching will take place. In severe cases, the foot takes on a cadaverous hue. If the nail beds remain pink under this elevation, one can be assured that an adequate collateral circulation exists. By having the patient sit on the edge of the examining table with his extremity hanging down, the amount of rubor or cyanosis is a good index as to the inadequacy of the circulation. If one will test out each patient to see at what level his circulation appears best, then it is easy to determine the proper position in bed for such a patient. Dr. Mont Reid called attention to the importance of finding the level of optimum oxygenation in the extremity of these patients. This is the position these individuals should use while at rest in bed. Usually it works out that the level of the heart should be slightly higher than that of the great toes.

It is well to instruct the patient in the proper care of his feet. Cleanliness is essential. Lanolin can be rubbed into callouses and corns each night to advantage. Strong antiseptics should be avoided but 70% alcohol is well borne. Nails should be carefully pared by a younger member of the family or a skilled chiropodist. Lightweight woollen socks are usually more comfortable than cotton. Loose well-fitting shoes with soft toes are desirable. Bed socks rather than hot water bottles or electric pads are best for warmth at night.

Care should be taken to limit the amount of walking to a point of claudication. As soon as fatigue or cramps begins, the patient should stop and rest until all sensation has disappeared before proceeding. Forcing through the cramp, that is continuing to walk, will produce a great deal of soreness in the calf muscles, which keeps the patient constantly uncomfortable and lame. A well-balanced diet with vitamins is helpful. A large intake of water daily is essential. Tobacco should be eliminated. A moderate amount of alcoholic intake is temporarily helpful in producing vasodilation. These patients should be encouraged to give up some of their activities and spend considerable time resting. At least, three hours daily should be utilized in either the active postural-change exercises or the use of some intermittent venous pressure apparatus. If they can be assured that in one month they will note definite improvement and in three will be able to walk comfortably for 2 or 3 blocks at a time, they will willingly cooperate. It is well-known that these individuals are more often the super-active, high pressure type. They simply must get into low gear and be prepared to remain at a slower pace for the rest of their lives. They can nearly always walk better on turf than the sidewalk. Therefore, they should be encouraged in the form of recreation that takes this into consideration—many of these victims can play a foursome at golf for a full round of 18 holes without harm or discomfort and with great benefit.

Finally, I wish to say just a word about immersion foot, which has interested Captain J. C. White of our clinic and of the Naval Hospital near Boston. He has seen a good many shipwrecked sailors brought in and has been very much impressed with the fact that immersion foot is a different syndrome from anything previously described. It is somewhat like the trench foot that we saw in the last war, but it has some very distinct differences. For instance, these men sitting in

a boat with their feet in water for a number of days, no matter whether the water is cold or whether it is hot, develop swelling, a numbness, a looseness of the skin, which goes on to gangrene if not handled properly after rescue. First of all, these men should not be allowed to try to walk but should be carried from boat to ambulance. After they are put to bed, the lower extremities should be elevated to about 35 degrees to allow the edema to subside. Also, an electric fan is turned on the extremities so that the tissues lowered in their ability to absorb oxygen are cooled. It took us a great while to find out that we must not apply heat to these extremities in need of oxygen. If we applied heat the oxygen demand was increased and we saw gangrene develop in the early treatment of cases of precarious circulation that came to our hospital, individuals who had been getting on very well at home for a period of weeks or months. It was because we erroneously thought these people with cool feet needed extra heat. We didn't burn them but we innocently increased the oxygen needs of the tissue thus defeating our purpo We now know that if we keep these extremities cool thereby reducing the oxygen need we will be more likely to have a successful outcome.

PREGNANCY WITH ACUTE POLIOMYELITIS

A Case Report

ALICE L. WAKEFIELD, M. D.
Louisville

I wish to explain that as obstetrician I am the last physician to see this case. Pregnancy occurred first but was not acknowledged or diagnosed until after the incidence of acute poliomyelitis.

The patient was first seen by a private physician (who has since died); after four days Doctor Sigler, County Health Officer in charge of the epidemic current in Henderson County, was called. On the third day after Doctor Sigler came in on the case the patient was transferred to Kosair Hospital in Louisville where she was given nine weeks active treatment. At this time the element of pregnancy presented certain social problems and it was considered advisable to transfer her to Susan Speed Davis Home. (A maternity hospital operated by the Salvation Army).

Doctor Sigler is here from Henderson; Doctor Wilder and members of his staff at Kosair Hospital are present. The case is equally theirs and they will discuss any questions that are put regarding the polio aspect.

CASE REPORT: V. L., female, white, born December 5, 1926, well developed, previous medical history not significant.

POLIOMYELITIS: Onset poliomyelitis August 9, 1943 with pain in head, back and legs, which grew progressively worse. On August 13th she collapsed and the family physician was called. Both knee jerks were considered hyperactive and there was slight abdominal pain to deep pressure. Nausea and vomiting developed with increased headache two hours after medication was started (type not on record). Later became drowsy, slept that night and most of the next day when she lost her appetite and developed pain in each arm and shoulder.

Temperature showed an elevation of from 1.2 degrees to 2.4 degrees on August 13th, 14th, 15th, and 16th.

On August 16th, when first seen by Doctor Sigler, head and neck were hyperextended and she continuously moved upper and lower extremities to gain a comfortable position (not choreiform type of movement). Chief complaint, pain and stiffness of neck, back, arms, and legs, and some headache.

Physical examination showed the following positive findings: Temperature 99.2 degrees, Pulse, 96, Respiration, 21. Slight congestion of nasopharynx, tightness of nuchal group of muscles. Slight enlargement of uterus, possibly some increase in recti muscle tone, generalized muscular weakness in both upper and lower extremities. Definite tightness in both hamstring and gastrocnemius muscles. Unable to lift arms to side of head without supinating hand or forearm. Back hyperextended. Treatment with hotpacks to shoulders, back, arms and legs started immediately.

On admission to Kosair Hospital August 19th there was pain and stiffness of neck and back with paralysis of both legs—movement apparently only in foot muscles. Involvement of recti muscles was indicated by inability to sustain attempt to grunt or hiss.

A mass was noted in lower abdomen. Patient stated her menstrual period was two weeks overdue, but denied possibility of pregnancy. Because of persistent morning sickness a vaginal examination was done and pregnancy diagnosed.

Routine Kenny treatments were started

Read before Jefferson County Medical Society, April 3, 1944.

with prostigmin and atropin therapy. After nine weeks patient was discharged to Susan Speed Davis Home with a trace of activity in all muscles except right anterior tibial. With the aid of walking sticks was able to walk, except that her pregnancy made it difficult to maintain her balance. Still unable to sustain grunt or hiss.

At Susan Speed Davis Home she walked for about six weeks with the aid of a walker, when she developed pain in the leg muscles. At this time she was unable to lift herself four inches above the floor to the level of the scale platform but could maintain her balance alone while being weighed. Two weeks after delivery she resumed her walking with the walker, then with walking sticks. At present the condition of her leg muscles is rated as poor with left foot muscles fair and right foot muscles a trace. She now can step onto the scales with support for balance only.

Pregnancy: The complete menstrual history was obtained after admission to Susan Speed Davis Home. Onset at 12 years, every 28 days, 7 days moderate flow, occasional dysmenorrhea. The last normal menstrual period was given as beginning May 18th.

Measurements were normal, presentation cephalic, position R. O., perineum intact, cervix clean, discharge normal. Blood pressure remained about 120/80. Weight reached 155 lbs. by January 14th, at which time muscle pains developed and all efforts to walk or stand were discontinued.

Onset of Labor: 2 A. M., February 4, 1944, admitted to labor room at 4 A. M. with mild contractions, blood pressure 130/80, fetal heart rate 130 at midline. At 1:35 P. M., the membrane ruptured letting head down onto perineum. Abdominal binder applied. Patient put on table with feet in stirrups. Pains every 3' x 60-70," strong—good diaphragmatic bearing down with pains. Slight contraction of recti could be felt above uterus. Occasional whiffs of ether given with pains. When patient made no further progress with pains due to inability to thin out and stretch the perineum adequately ether was given to allow small episiotomy. Then patient was allowed to finish delivery by own efforts.

Normal female infant, weighing 6 lbs. 13½ oz. delivered at 3:03 P. M., placenta delivered spontaneously at 3:06 P. M.

.5 cc. pituitrin given after head was delivered, .5 cc. pituitrin given after delivery of placenta.

Blood loss 200 cc. An hour after delivery blood pressure was 120/80, bleeding normal, uterus small, firm.

Uneventful postpartum history with normal examination at sixth week. At this time the right rectus muscle showed poor tone while the left was still flaccid.

Summary: Acute poliomyelitis developed about the twelfth week of pregnancy with a febril period of two weeks, active treatment by Kenny method for ten weeks and medication for nine weeks. Use of affected muscles was interrupted three weeks before delivery and begun again two weeks postpartum.

The course of pregnancy was normal, delivery occurring spontaneously at eight and a half months according to calculations on the basis of last menstrual period. Labor was normal, the only assistance given being an abdominal binder to reinforce the weak recti muscles, and an episiotomy to enlarge the outlet to recompense for patient's inability to iron out and stretch the perineum adequately. The baby shows no abnormality.

EIGHTEEN MONTHS EXPERIENCE ON THE INDUCTION BOARD

John J. Moren, M. D.
Louisville

Working on the induction board is not an exciting job, it is trying and tiring. It is not very pleasing to hear the stories of many of the men; they have their problems but regardless they are willing to do their part. Nearly all say, "the job must be finished, I am no better than anyone else." That shows a good American spirit.

I have had only one man to really complain, he was a farmer with a family and was producing. He thought others should have been called first.

The center is a good place to see a variety of men, to see good and bad surgery, to learn how many people never go to a Doctor, to find how many cannot read or write; their ways of life, habits and how little attention the country boy pays to his general health, posture, etc. Circumstances and opportunities are lacking to stimulate them to do otherwise. Many interesting cases are seen, but time does not allow full study.

The men are sent in by their respective

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boards and you would be surprised to know that among them are the partially blind, hemiplegic, one arm or leg, dwarfs and many physical defects which ought to be left at home, but the board's quota must be filled.

The men are examined in an orderly manner, appearing before some fifteen different stations, manned by 16 or 18 doctors aided by enlisted personnel.

The examination begins with the psychological test to determine if the Inductee meets the required intelligence standard. After this test they proceed in the following manner: X-ray lungs, Genito-Urinary and Hernia, Ear, Nose and Throat, Eye, Teeth, Blood Pressure and Pulse, Heart and Lungs, Hearing, Weight and Height, Orthopedic, Color Vision, Neuropsychiatry and last Blood for Kahn Test.

Each station records their abnormal findings. The examination at each of these stations is principally by observation or instruments and few questions are asked.

In the department of Neuropsychiatry the Inductee is questioned about his health and especially that of nervous and mental diseases and personality disorder. We have the advantage of the information furnished by the various stations.

No set list of questions are used, each doctor follows any lead which he finds in that particular individual, just as you would in your private practice, try and find out if there is anything wrong with the patient.

The following partial list shows what we are looking for: Mental defects or deficiency, Psychopathic personalities, Neurotic trends, State of Mental Depression, Physical complaints, History of insanity; Signs of dementia praecox, Drug addicts, Somnambulism, Alcoholism, Syphilis of nervous system, and any existing disease of the brain, cord or nerves.

When you consider that 46% of the casualties are neuropsychiatric one can understand the importance of picking out these neurotics before induction. This is not an easy matter with the time alloted. While there are 4 to 6 men in the Neuropsychiatric department they can not devote much time to each inductee when there are 5 to 7 hundred men to be examined.

A good number of A 1 men can be judged quickly, allowing more time for the questionable cases.

It is absolutely impossible to say whether this or that individual is going to break down under the stress and strain of modern war, but we can exclude the many unstable, inadequate, neurotic and psychotic personalities. This is being done far better than in War One. Three times as many are being rejected in this war as were in War One. The Army has no time to make men out of these individuals. Uncle Sam wants men to make soldiers.

The following cases will illustrate some of our questions:

1. A young man, age 24, was truant at school, fought with playmates, had no steady job, changed jobs frequently, socially had few friends, sought friends in pool rooms, had several minor arrests. He was rejected as a psychopathic personality. When he was rejected from the Army he objected to the decision, feeling we did not treat him right.

2. Young man, 25, orphan boy, works regularly, reliable, sleep walker, easily excited, worries, marked stuttering, boys mocked him, avoids people on account of speech, spends evenings in work shop, rejected as psychoneurosis.

3. Another type, mother's boy; restless in examination, pulse 100, sweat drips from arm pits, slight tremor, poor sleeper, cardiac ache, digestion troubles, faints easily, rejected as constitutional inadequate or psychoneurosis.

4. Another type, age 21, healthy life, did well in grade school, fails in high school. Stops sports, stays at home, seclusive, no outiside interest, few friends, attempted to work but did not make good, suspicious of others, etc. Rejected schizoid personality, dementia praecox.

5. A bank teller, age 35, good physique, tremulous, emotional, tears in eyes, axilla sweating profusely, overconscientious, dreads criticism, timidity, worries, no hobby, no sports, rejected as constitutional instability or psychoneurosis.

6. Factory worker, age 37, overweight, apparent healthy life, steady worker. Blood pressure 120, pulse 100. Has occipital headaches, vertigo, night leg cramps, a day's work tires him out. Rejected as constitutional inadequate (fearing a vascular breakdown, could not "take it.")

7. Boy, age 18, book worm, did well in school, no sports, preferred music, not interested in girls, but would be sociable. Marked acrocyanosis and sweaty hands, palpatation and ache in flanks after physical exertion. Rejected as constitutional inadequate, psychoneurosis.

You have noted comments in the daily press about the Psychoneurotics. This word, like malaria and rheumatism, in-

cludes a variety of nervous symptoms, which include pictures of Hypochondriasis, Hysteria, Nervous Exhaustion, Anxiety states, Visceral neuroses, etc.

This term psychoneurosis is not used by all of those reporting their experiences in Camp, hence we note a variable percentage of hysteria, hypochondria. They prefer to use the term which applies to the case instead of the general term psychoneuroses, which is so popular today.

These boys adjust themselves in civil life and appear to be good men but when subjected to the soldier's life they cannot "take it." Many discharged under this classification are disturbed about the word "Psycho," fearing the stigma will interfere with their future work. Let me remind you that many such men are holding responsible positions in civil life.

One writer reports the result of an investigation of 75 discharged as psychoneurotics and found 86% making good, some returned to some military service, others going to school or doing good defense work. All were trying to overcome the supposed stigma or inaptitude, psychoneurosis, etc.

You might ask how do we pick these men. My method is to watch the boy. Note how he approaches you, timid, scared, indifferent, belligerent, note how he responds and performs during examination. If he has made good adjustment in school, sports, work and social life you have a pretty good man. If mal-adjusted in these four stages of life there is some cause, troubled or broken home life, associates, illness or psychopathic. I pity the country boy with no schooling, no sports, little social life but works hard. If inducted and can adjust himself to army life he makes a reliable soldier, but reports in the medical press indicate that the uneducated show a big percent of discharges from neurotic causes.

The Army does not want the unreliable alcoholic, if deteriorated; the pronounced bedwetter or sleep walker, nor the psychopathic personality though he may prove a hero, he does not like to obey orders or be restricted. The chronic complainer, gold bricker, is a liability. One writer from Arica says, categorically, that these men will break in battle.

I have been especially impressed with the number of asymptomatic syphilis. The blood is positive, no symptoms and little or no treatment. From November 1940 through September 1941, in 25,000 inductees there were 503 in the white race and 1230 in the negroes. It is surprising to me to see how frequently the blood pressure registers 150/90 which the Army will accept. A recent report showed that 18—20% of 25,000 inductees had a systolic pressure of 140 or higher.

Often the pressure will be higher at the station but when examined by outside doctors it will register much lower. I have noted a good name for these, "Vascular hyperreactors." Under the natural stress and anxiety of the examination, a new experience, causes a tension, which, in certain individuals, instead of becoming nervous, the reaction is through the vascular system. I have heard reports from such men after serving in camp showing a more normal pressure.

Unequal pupils without other symptoms has impressed me. Error of refraction with tension of the examination may help account for this. A study of 3000 prisoners showed 576 unequal pupils on admission, but on examination next day only 296 were unequal.

Absence of deep reflexes without other signs is frequent and verify the statement that this occurred in about 10% of apparently normal individuals.

My experience has convinced me that there is a real cerebral concussion syndrome. I have had men to tell me their symptoms have existed for 20 years.

It is recognized that these individuals can not stand alcoholic drinks, often they say, "I had to quit drinking on account of headache and vertigo." The Navy does not want these cases as the percussion of the big guns ruin them. Last winter I saw a man who had suffered a concussion. He recovered sufficiently to return to work, which was at the Army approving grounds. His headache and vertigo returned and he was off duty for many weeks.

Very few epileptics have been detected. Whether they are culled by the boards I can not say, but discharges from the Army show 2—9% of convulsions.

The conscientious objector is certainly an interesting character. I asked one man "If the Japs would burn his home, kill his wife and children, would he fight back?" his answer was: "I would let him alone." They are not insane, but certainly there is a screw loose or short circuit in their mental mechanism. The older men I believe are more sincere, but the younger men I suspect a motive in their membership. Whether to class them as psychopaths is

questionable, as it would include many people with cranky ideas and might include ourselves.

Nail-biting is found more frequently than I had suspected in adults. It is an expression of tension, anxiety, etc. I had heard the Marines would not accept these boys, so I asked an old Sergeant and he said the Marines did not want them. "In an emergency they might bite their nails instead of pulling the trigger."

Many cases of hernia are rejected and then returned for second examination. Most of them have made no attempt to have this rejecting disability corrected. Possibly they regard it a good non-admission ticket to the Theater of War.

MALINGERING: We are all on the alert for these cases. Fortunately, I have met few whom I would regard real malingerers.

No one wants to go to war and if you have any complaints at all they will doubtless become more important to you when drafted. A little exaggeration at such times I would consider human. We often give various excuses to avoid something that is unpleasant. We even claim deductions on our taxes that are not allowed.

In the rural districts men have few interests, have lots of time to note rheumatic pains, stomach upsets, backache after a strain, etc. When called by the draft board they recall these symptoms. Doubtless many have succeeded in getting by—fooled us.

The real malingerer resorts to many tricks; For instance: digitalis to cause irregular hearts; picric acid for jaundice: cantharides to induce albuminuria; sugar for diabetes; barbaturates for dullness, benzedrine to cause nervousness; epinephrine to elevate blood pressure; alcohol for 2 or 3 days to appear alcoholic; Drug to dilate pupils; cocaine snuffed to produce mental disorder; condensed milk in ear, simulating discharging. I had one boy with a wide dilated pupil, the Eye Department marked mydriatic.

I feel that in the psychological test that some men show a mental deficiency that is not consistent with their daily performance. A man who manages, successfully, a 250 acre farm is not dumb.

Frequently we have an epidemic of sleep-walkers and bed-wetters. Major Gordon suspected this information was passed around before induction. Lots claim they have suffered various disorders for the past two years, in other words "after Pearl Harbor."

Some boys are so anxious to get in the army that they deny any illness, most of them show such marked nervous trends that they are detected. We have no way to detect epilepsy and many are inducted. It is assumed that the statements made by the boys are true unless there is reason or a clue to doubt them. In doubtful claims as bed-wetting, sleep-walking, epilepsy, etc. they are referred back to their boards for information.

From 2 to 7 percent of those complaining of nervousness after induction have been labeled as malingerers by the Army Examiners.

REJECTIONS: The only reliable figures available are those given by Col. Rountree of the Selective Service, dated August, 1943. About 10,000,000 men have been examined by Local Boards and Induction centers, 2,800,000 have been rejected as 4 F.

"In the selection of men for a peacetime Army the rejection rate approximated 50%. With all the changes incident to Pearl Harbor, the lowest rate ever attained was approximately 30%. For the teenage registrants the rate of rejections was 25%; for white, 23%; for negroes 45%. The general rate of rejection at the moment (May, 1943) is approximately 39% and is on the upward trend."

In the Medical Statistics, Bulletin No. 2, August 1942 I note the following: From November 1940 through September 1941, 3,000,000 registrants were examined by Local Boards. For every 1000 examined, 438 or 43% were rejected by the board, 16% of the remaining 562 would be rejected at the Induction station, leaving only 472 of the original 1000, a rejection rate of 51%.

The principal causes for rejection in the white race are eyes, teeth and mental and nervous diseases; in the negroes, educational deficiency and syphilis. As for education the greatest number occur in 8th grade and high school graduates. Psychoneurosis begins about the age of 17, the peak occurring at 21-22 (Maj. Russell).

In the occupational group Rountree gives farmers 41%; laborers 37% as the highest and professional and semi-professional, craftsmen, foremen 20% as lowest. These percentages are for whites and negroes combined. The negro rejection is much higher than the white.

What has been the result of this pre-induction examination? Very few figures are available. Col. Rountree reported in 1943 as follows:

"The figures covering the rejection and discharges in the field of nervous and mental diseases and personality disorders on certificates of disability discharge between July 1941 and through January 1943 yield a total, for both volunteers and inducted men, in excess of 100,000 discharges. Of this group 30% were discharged for mental diseases and personality disorders, or a total in all of more than 30,000. It would seem, therefore, that to date more than 700,000 men have been screened out prior to induction and 30,000 men have been discharged for disability in this field. Thus it would appear that more than 20 men of this kind have been kept out of the military service for every 1 who has broken down in the service. This indicates that screening processes have proved reasonably effective."

One doctor in the South Pacific, who served with men who had the regular induction examination and others inducted through the National Guard, found that the nervous crack-ups were about equal in the two groups.

It is interesting to note that induction centers reject more psychoneurosis while the Army camps discharge more dementia praecox, the majority of these cases appear in from 2 to 6 months after induction.

Before Pearl Harbor, break-downs were not so frequent, but after war was declared they more than doubled. The realization of real war brought on apprehension, anxiety and fear and insecurity. A recent writer from Africa claims that anxiety is the basis of most of the cases that have occurred in that theater of warfare. His explanation seems reasonable when you consider that 60 to 80 percent are returned to duty in a short time. The approved treatment of these cases near the front line is proving successful. In World War One only about 2% were returned to duty.

An interesting question has been raised about the Pre-Pearl Harbor Fathers who are being inducted, "Are they loaded with possibilities of conflicts and neurotic escapes?" So far my impression has been very good, they appear as a lot of fine men, who have few complaints and a favorable philosophy of life.

It is interesting to note the predominating diagnosis of mental and nervous diseases in various wars. In the Boer war it was depressive states; in the Russo-Japanese war, alcoholic, confusional states and gross hysteria; in World War One, shell-shock; in the Present War (United States) dementia praecox, psychoneuroses, psychopaths, battle fatigue. In England, before Dunkirk, it was mental deficiency, Epilepsy, Anxiety State. After Dunkirk it was exhaustive delirium and acute confusional states. These variations may be attributed to race, advancement in the study of these conditions and type of warfare.

What hurts my feelings is the statement made by Army doctors, that 60-80 percent of those cases breaking down had symptoms previous to induction and should have been rejected.

One cannot unravel the tangled life history in 3 to 5 minutes.

DISCUSSION

W. E. Gardner: I have been very favorably impressed by the work here not only of the civilian psychiatrists but of the full time army psychiatrists in rejecting a higher percentage for nervous and mental disorders than they do at some other induction stations. Of course, they do not approach some of the ideal figures suggested, but sometime ago Major Gordon told me they were rejecting here approximately fifteen percent for nervous and mental disorders. That will save a lot of casualties later on. The Selective Service Department is anxious to get men into the army for military training. Sometimes the officials feel perhaps a little more liberal attitude should be taken, but I am glad to see the rigid standards that are apparently being maintained in trying to detect these neuropsychiatric disorders and having them rejected here rather than have them get into army camps, or even overseas and then break down. We all remember the tremendous cost this country has had to bear for psychoneurotic breaks from World War I. When we think of what will be added to the burden after this war it is staggering. We sometimes wonder how the country will be able to sustain the casualties from this source, to say nothing of the damage which may be done to the individuals themselves.

Major W. B. Atkinson: It is interesting to look at a map of Kentucky, divided by three lines across the upper, middle and lower sections. In the lower group of counties, the counties where we have the illiterates, the counties where the babies are delivered by midwives, we find that rejections will run around 50-60%; in the middle group, 40%; the upper section along the Ohio river will be around 30%. So that shows that where we have better education we have better health, more education, more money. So the rejection rate will run almost equal to the school systems and the fi-

nances of the people that live in that section. There is one exception. If you have more money you can buy more syphilis. You will find that there are five centers in Kentucky that have syphilis in satisfactory amounts: around Lexington, around Louisville, around Henderson, Hopkinsville and Owensboro, and around Cincinnati. You will find, also that there is a race track in each of these places. I don't know how much connection there is between horses and syphilis. I am convinced it is not absolute because up around Harlan there is another center of syphilis. We are finding that where the people have a little better education and where they have more advantages in life they can pass the examination a little better, so that gives us a little clue on the way to prepare for the next war—if we can start by educating them a little better, by increasing family income, by improving their health, because you cannot buy typhoid fever and other good things of life, but it seems that you can buy syphilis.

Selective Service is not particularly interested in the number of men that are rejected. We have no fight at all with the induction station. We have found in rechecking these men who have been rejected for psychiatric reasons that the diagnosis is practically always confirmed.

There is one peculiar reaction that these fellows have. They will go up to the induction station and be rejected for psychoneurotic or schizophrenic personality. That is all right. But they almost always go home and say: "I put it over on the examiners." These men must build up their ego a little to prove adequate.

We also have a committee headed by Dr. Miller who is checking up all our chest X-rays, and we are finding very few of those that are not properly rejected, so I believe that the induction station, as a whole, is doing a darn sight better job than I could do if I was managing it.

The first case report that Dr. Moren read tonight I thought was defining me but I found out it was the second one.

Changes In Expectation Of Life: Between 1930 and 1940 the expectation of life at birth of the total population increased from 59.0 to 63.3 years, an increase of 4.3 years or 7 percent. Increases occurred throughout the entire life span, the average increase being about 5 percent. At the beginning of the century, 40 years previously, the expectation of life at birth for the population of the original registration States was 49.2 years; the corresponding figure in 1939, 63.3 years, represents an increase of 14.1 years, or 29 percent.

PRELIMINARY REPORT OF THE COMMITTEE FOR THE STUDY OF INFANT MORTALITY IN LOUISVILLE

MARGARET A. LIMPER, M. D.
Louisville

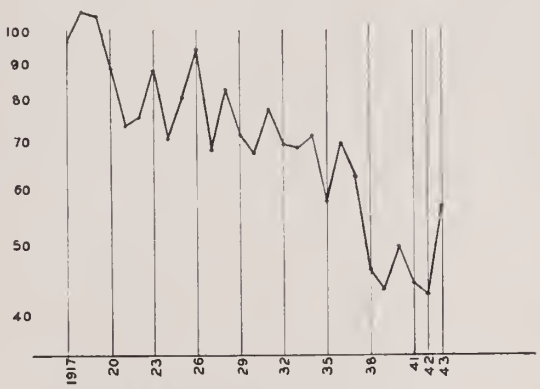
We wish to emphasize the fact that this report is definitely preliminary. The work is still in the planning stage, and we really have only begun to analyze the problem.

Because of an increase in infant mortality in Louisville in 1943, following a decline over a period of five years, with the lowest recorded rate occurring in 1942, a year when the birth rate was high, Drs. Leavell and Veech instigated the appointment of a committee to undertake this study.

The members of the committee are: Drs. Annie Veech, Alice Chenoweth, C. B. Gettelfinger, Bruce Mitchell, and the author. Dr. Leavell is an ex-officio member of the committee, and both he and Dr. Oma Creech of the City and County Health Department staff have been extremely helpful in preparing statistical studies.

There were 7,632 live births in Louisville in 1943, of whom 431 died. About 50% of these deaths occurred in the first month of life, and the remainder at from one month to one year of age.

Figure 1



INFANT MORTALITY RATE
Per 1000 Live Births
Louisville, Kentucky
(Semi-logarithmic scale)

Figure I gives a graphic picture of infant mortality rates in Louisville since 1917. In 1942, the rate was 42.7 per 1,000 live births, which was lower than the U.

Read before the Jefferson County Medical Society, April 17, 1944.

S. rate of 48 per 1,000. In 1943, the Louisville rate rose to 56.4 per 1,000 live births.

The leading cause of death for the group was prematurity, and we shall return to that subject a little later in the report. Surprisingly enough, the leading cause of death beyond one month of age was communicable diseases, with gastro-intestinal diseases and respiratory infections not far behind. The death rate for each of these causes was double or more than that for 1942.

The year 1943 was an epidemic year for measles, and whooping cough probably accounted for most of the remaining communicable disease deaths. We must continue our efforts to educate the public to avoid exposing young infants to these two diseases particularly. The effectiveness of passive protection of measles contacts with immune globulin or convalescent serum was demonstrated repeatedly in private practice and in some institutional outbreaks in Louisville in 1943. Pertussis immunization should be a routine protective measure for all infants, and should possibly be started at an earlier age than has been the practice heretofore.

Regarding the increase in deaths due to gastro-intestinal disorders, one should not be over-optimistic or over-pessimistic over statistics for one year. Fluctuations in mortality rates occur from time to time. The infectious diarrheas are more virulent in some years than in others, and weather conditions no doubt influence morbidity and mortality from diarrhea. In Nashville, at Vanderbilt University Hospital, infants with diarrhea are admitted to air conditioned nurseries, with very favorable results on the period of hospitalization and on mortality. It is now an accepted fact that dehydration is not only a sequela but also an antecedent of diarrhea in young infants.

It is the clinicians' impression that the winter of 1943-44 has been one of the worst we have experienced from the standpoint of morbidity due to respiratory infections in infants. Perhaps the respiratory pathogens are becoming acclimated to sulfonamide therapy.

There is still much to be done toward reducing mortality in these older infants. A great deal has been accomplished by regular examinations in the offices of physicians in private practice, and by the well child conferences conducted by the Health Department. A strenuous effort has been made to help mothers to nurse their babies successfully, and among those delivered at the General Hospital, real progress has been made. The hospital practice of giving formulas routinely before and after the mother's milk comes in, and the indifferent attitudes of many physicians and nurses toward maternal nursing accounts for the fact that babies leaving private hospitals on breast feeding alone are the exception rather than the rule. Fifty-six Louisville babies died of diarrhea last year, and we think we can safely say that practically all of these were artificially-fed infants. Mothers who follow their husbands from camp to camp could travel with their babies much more safely if the babies were breast-fed.

Returning now to the neonatal deaths, we present Table I, which gives the figures of the various Louisville hospitals for the number of live births, number of newborn deaths, mortality rate per 1,000 live births, and the number of stillbirths. The latter is not properly a part of this report, but most of the hospitals included this information with the data requested,

TABLE I

Institution	No. of Live Births 1943	No. of Newborn Deaths	Mortality Rate Per 1000 Live Births	No. of Still Births
A	67	1	14.7	1
B	1715	35	20.4	35
C	1427	27	18.9	28
D	1133	24	22.0	13
E	56	1	17.1	4
F	981	18	18.2	21
G	396	10	25.2	5
H	1159	68	58.8	41
I	463	10	21.6	13
J	1021	26	25.4	16
Totals	8418	220	Av. 24.23	177

and we thought it added interest to the report. In Column 4, there is considerable variation in the apparent mortality rates; however, if we combine fetal and neonatal deaths, we find that Hospital B has a total mortality rate of 41.1, which is slightly higher than Hospital J's rate of 40.5 per 1000 deliveries, although J's newborn death rate is appreciably higher. Also, Hospital E, a small negro hospital, reported a newborn death rate of 17.1, but had a total mortality rate of 83.3, which was practically the same as that of Hospital H (83.1) which had a newborn death rate of 58.8. Stillborn babies represent potential citizens also, and a high stillbirth rate calls for more adequate prenatal care and better obstetrics, with particular attention to analgesia and anesthesia during labor and delivery, and avoiding the injudicious use of pituitrin and related drugs.

The discrepancy in the figures given at the beginning of the report and those in this table for live births and newborn deaths is accounted for by the fact that the former are for babies born to Louisville residents, while the hospital figures include many out-of-town cases. The obstetricians on the committee believe that the mortality rate in private hospitals is increased by the inclusion of out-of-town cases, many of whom come in because of obstetrical complications. On the other hand, many of the mothers from the higher economic brackets, who have had the benefit of the best available care, come from the extra-urban area of "greater Louisville."

It should be not only a matter of civic pride, but also a matter of individual professional responsibility to get our figures down to the irreducible minimum. The fact that the newborn infant has not yet developed a personality may be responsible for some of the indifference on the part of physicians caring for these little patients. Disease states in older individuals with a mortality of 1 in 40 such as existed for newborns in Louisville in 1943 have aroused strenuous efforts on the part of the profession itself to reduce mortality, whereas the incentive to combat infant mortality has usually had to come from public health organizations.

Many of you no doubt read the symposium on infant mortality in the February 5th issue of the Journal of the American Medical Association. The title of Dr. Torpin's article, "The Care of the Fetus During Labor" is unique and provocative. Dr. Potter's article on "The Lessons to be Learned from a Study of Infant Deaths" was also very enlightening. She states that for the purpose of reducing infant mortality in Chicago, a study of its causes, with particular attention to autopsy findings, was instituted in 1936. It was found that prematurity was a direct cause of approximately one-fourth of all deaths occurring under one month of age, and was a contributing cause in at least an additional one-fourth. She points out that death rates in Chicago have shown a much more striking decrease than those for the country as a whole. In 1942, the infant mortality rate for Chicago was 28.4 per 1,000 live births, while for the United States as a whole the rate was 48 per 1,000. The rate under one month was 20.3, while in the country as a whole it was 29 per 1,000.

We believe that what has been done in Chicago can be accomplished in Louisville if the profession and the public become sufficiently aroused.

Again, we repeat that our leading cause of infant deaths is prematurity. There were 19.5 deaths from prematurity per 1,000 live births in Louisville in 1943. As can be seen from the table, the General Hospital ("H" in the table) had 68 newborn deaths (58.8 per 1,000 live births.) Of the 1159 live births, 120, or 10.3%, were premature births. Forty-nine of these premature infants, or 40.8%, died under one month of age, and a number of others died after they were a month old. In addition, there were 34 premature infants admitted from outside the hospital, of whom 24, or 70.6% died. Transporting these infants frequently is associated with chilling, in spite of the fact that a portable incubator is available for this purpose, and others probably are harboring infections when they are brought in. The mortality for the combined groups was 53.25%. The principal cause of death in the group was diarrhea, and infection is probably the cause of most of the diarrheas.

In fairness to the hospital, it should be stated that 37 of the 82 prematures who died weighed 3 pounds or under, and five more were not weighed, so were probably very small and in poor condition at birth. Eighteen of the deaths occurred in the first 24 hours of life.

Certain features of the handling of these infants are grossly incorrect: (1) The opportunity for initial chilling is too great for both full-term and premature

infants. (2) The space provided for both groups is much too limited. (3) Aseptic technique is not observed, and probably cannot be observed with the facilities available at the present time. There is no running water in any of the four premature and full-term nurseries. A streptococcus and a spore-forming organism were recently cultured from the nurses' scrub pan in one of the premature rooms. (4) Breast milk is not refrigerated soon enough after pumping, and bacterial counts have been abnormally high. (5) The nursing personnel is inadequate as to numbers, and is not trained for the highly specialized care required for premature infants.

The committee hopes that such criticisms as it makes will be accepted as constructive criticism. There is no reason why the present medical officers and nursing staff should accept even the major blame for the conditions found. There has been a gradual relaxation of standards, and now the results are beginning to show. The obstetrical and pediatric teaching staffs have been greatly reduced by the exodus of many of our well-trained younger instructors to the armed forces; consequently, the house staff has not had the supervision and advice that it should have had. It has been said that the "status quo" is the greatest enemy to progress. There has been a sort of tradition at the General Hospital to dismiss suggestions for improvement with one of two excuses: "We don't have sufficient personnel," or "We don't have enough money for that." We believe that where it is a matter of life and death, that something can be done.

At the present time, the committee recommends, and the Health Department will try to carry out the following recommendations:

1. Training at least one nurse in a center that is doing outstanding work with premature infants, so that she can in turn train graduate and undergraduate nurses working with her.
2. Keeping the nursing staff for obstetrics and the nurseries separate at all times, day and night. If possible, there should be one nurse assigned to prematures only.
3. Dividing all nurseries into cubicles.
4. Improving the facilities for keeping the milk supply sterile.
5. Providing a heated bed or crib in each delivery room.
6. A complete revision of present methods of handling premature infants, to conform with the best practices elsewhere.

The committee believes that the suggestions for the General Hospital may well apply to the private hospitals also. If the staffs of the private hospitals wish to have a more detailed study of their newborn mortality, this can probably be arranged. We should like to recommend more frequent use of obstetrical and pediatric consultation in difficult cases. We also urge post-mortem examination of all infant deaths. Such vague diagnoses as "grippe" and "congenital debility" still appear on death certificates too frequently. If death is found to be inevitable, autopsy findings are comforting to the physician, as well as to the family. If death was preventable, then the doctor should know about it, and try to prevent its occurrence in future cases. Histories and physical examinations of infants are frequently not very revealing, even to the experts, and much can be learned at the autopsy table.

Summary

1. An alarming increase in infant deaths occurred in Louisville in 1943.
2. Prematurity was the greatest single cause of all infant deaths.
3. The 1943 death rate for communicable diseases, gastro-enteritis, and respiratory diseases was more than double that for 1942.
4. Certain suggestions are made for the prevention of infant mortality.
5. Physicians are urged to request autopsies on all infant deaths.

DISCUSSION

Annie S. Veech: This report definitely indicates the need of improvements in the care of this group of little people. There is need in hospitals of better aseptic care, more good hand washing on the part of the nurses, before feeding babies and after diapering. For this hospitals should have running water in every nursery. No improvements in surgery or obstetrics was ever accomplished until the need of aseptic care was recognized. The next important move is the installation of cubicles for every bed, so the beds of babies will not be jammed together like men in a "flop house." Warmth and gentleness in handling and breast milk are great factors in saving babies.

Alice Chenoweth: An interesting fact revealed by Dr. Limper's report is that the statistics here in Louisville for infant mortality, are in general, similar to the statistics for the state and for the nation, in that fifty or more per cent of the babies who die in the first year of life, die during the first month of life. Eighty or ninety percent of neonatal deaths are due

to prenatal or natal causes, which means that the cooperation of pediatricians and obstetricians is necessary if the neonatal mortality rate is to be lowered. In Kentucky, infant mortality has been decreasing considerably for infants over one month of age, but neonatal deaths are decreasing less rapidly, and the mortality rate for newborns under one day of age is decreasing scarcely at all.

I wanted to ask Dr. Limper whether or not a uniform standard for classifying prematures was in use in all hospitals in Louisville. I think it was in 1935 the American Academy of pediatrics recommended that all infants whose birth weight was less than 2500 grams, be considered premature.

Margaret A. Limper, (in closing): In answer to Dr. Chenoweth's question, we do not know what the definitions for prematurity are for the various hospitals. The deaths given for prematurity are those given on the death certificates. If the physicians ascribed death as being due to prematurity or if prematurity was a contributing cause of death, then that was listed in the figures that were compiled by the Health Department.

UNDULANT FEVER

Harry S. Frazier, M. D.
Louisville

Undulant fever or Brucellosis is, to say the least, a very exasperating disease to the physician, and something infinitely worse to the patient. To begin with, the clinical diagnosis is not easy because the protean nature of the disorder which may include symptoms from mild malaise to meningo-encephalitis. Leukopenia and a relative lymphocytosis are usually discovered in the white blood cell count which should suggest the propriety of ordering blood agglutination determinations. Even so the physician may spend many fretful days waiting for recalcitrant agglutinins to form in the blood, and the percentage of positive blood cultures is not too good without special care and technique. Intradermal testing is of some accessory diagnostic aid.

Treatment is unsatisfactory. The literature does not show sulfonamide therapy to be very successful, yet I think it should be used during an acute initial febrile phase especially if septic in behavior. The immune serum prepared from cattle can also be given intravenously. Later one would give Brucella melitensis vaccine, also in the chronic cases. Exacerbations may occur even after several years so that it is difficult to pronounce the patient cured.

Fact finding about the epidemiology will generally reveal that contaminated raw milk or dairy products are the sources of infection, though farmers, veterinary surgeons and butchers can contract the disease directly from infected animals. In the ten years from 1930 to 1941 there were 29,594 cases of brucellosis reported in the United States.

The organism is very resistant and may live for a month or more in dust or water. The incubation is from 5 to 21 days and the onset is most often characterized by fever, chilliness, aching, polyarthritis or neuritis, and respiratory tract symptoms are common.

The current modern editions of standard medical text books all mention the same 5 or 6 different types of brucellosis: (1) latent; in which no definite symptoms or perhaps only those of neurasthenia are present. (2) Mild chronic ambulatory, in which symptoms of low grade infection are recognizable. (3) The straight febrile (typhoid-like) variety which runs a course of 4 to 6 weeks without remission. (4) The undulating type, perhaps the most typical. (5) The chronic type in which the disease continues low grade with occasional febrile exacerbations from one to five years. (6) The acute fulminating type which usually terminates in death within two weeks.

Within the past year we have seen three different cases exemplifying different types of this disease which will be briefly reported:

(1) The first, an example of an acute undulating variety was that of a 48 year old woman, single, resident of a small rural community who had certainly been accustomed to drink the raw milk of a neighbor's dairy. She was seen in November 1942 having several daily chills with fever varying from 104 - 106 degrees. The prodromal period had been about two weeks with some aching and malaise. This patient appeared to be suffering from an acute generalized respiratory tract infection, coryza, pharyngitis, laryngitis and bronchitis, all were quite prominent and required symptomatic treatment. The spleen could not be palpated. When chills and high fever persisted four days and two leukocyte counts showed both a leukopenia and an increase in lymphocytes (5,300, Polys 37.5%, Lymphs 59%, Mon.

Read before the Jefferson County Medical Society, March 20, 1944.

2.5%), the agglutination tests were ordered and Brucella suis was agglutinated in a dilution of 1:800. The acutely febrile phase persisted 7 days which was followed by a ten day remission of little or no fever for ten days in which the vaccine was ordered and treatment started. After the second injection of vaccine there was another septic febrile period of six days but the temperature did not exceed 104 degrees. Treatment was continued for several weeks, the agglutination strength originally 1:800, 1:640 a few days later, fell to a mere 1:50 at the end of three weeks. This patient was reported as well by a relative nine months later.

(2) The next case illustrates the extreme chronicity which Brucellosis may exhibit and the difficulty of recognition in such cases: This patient, a young Catholic nun, had at the age of 32 suffered so severely from dysmenorrhoea that a presacral neurectomy was done in 1933. This relieved the complaint but unfortunately caused a partial paresis of the urinary bladder so that dribbling, faulty control and incomplete emptying resulted. Catheterization caused a urinary tract infection and this was treated for some time. Chills and fever were intermittently present and during such a phase in 1934, nine months later when the urine appeared to be perfectly negative, agglutination tests were ordered and a positive reaction was found with the Brucella suis strain at 1:800 dilution. Treatment was symptomatic and the disease apparently ran its course with three exacerbations in six weeks and finally after three weeks normal temperature and a reaction of 1:50 the patient was discharged. She remained frail and ill much of the time, having difficulty with her bladder and occasional urinary tract infections. Brucella was not further considered in this nine year period until in May 1943 after several weeks of low grade fever not exceeding 100 degrees, her blood was again examined and found to agglutinate B. suis in 1:200 dilutions, the initial injection of vaccine .15 caused a chill and 103 degree temperature. The vaccine was continued for 5 months, the same dose being repeated at weekly intervals until the febrile response was less than one degree and then the dose increased .05 of a centimeter. At the end of four months an entire cubic centimeter could be tolerated and the agglutination titer had fallen to 1:100. At this time the patient felt much better and wished to discontinue treatment, and observation has been temporarily discontinued. This patient's spleen was never palpable but her blood count always showed a subnormal number of leukocytes with the lymphocytic cells about equaling the granulocytes.

(3) The third case was one in which pulmonary signs prevailed and agglutination tests were negative and blood culture positive, apparently responding to sulfonamide treatment. A white female, age 50, was seen November 3, 1943, complaining of pain in the right chest, dyspnoea and fever. She had not felt well all summer and had suffered pain in the same chest, possibly fever on two occasions of fatigue, in June and September of 1943. Medical aid in another city had been sought two weeks prior to this patient's arrival in Louisville but chest X-ray had been inconclusive and blood agglutination tests were negative.

Here she was found to be having fever of 101-102 each evening preceded by chilliness, there was fluid in the right chest with underlying pathology suggesting unresolved pneumonia. The thoracentesis fluid contained numerous round cells but was sterile so a guinea pig inoculation was done, the white count averaged 8,500 with the differential counted about normal. Agglutination tests for brucella were negative. A blood culture was successful in that a short gram-negative bacillus was grown which the bacteriologist reported as an atypical Influenza (Pfeiffers) bacillus. Treatment with sulfamerazine was instituted and subsequent blood cultures were negative. The sulfamerazine was discontinued eight days later when a skin rash and toxic nausea presented themselves. The patient made a satisfactory recovery and was discharged as a cured case of Pfeiffers bacillus bacteremia. Several weeks later the examination of the guinea pig revealed lesions so typical of brucellosis that the bacteriologist revised his opinion. This patient has continued in good health and will return to this city shortly for further blood agglutination tests.

Conclusion

Undulant fever is presented to your attention as a constantly present diagnostic and therapeutic problem which should always be borne in mind. Three cases of different varieties are herewith presented.

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NEXT ANNUAL MEETING LEXINGTON,
SEPTEMBER 18, 19, 20, 1944

COUNTY SOCIETY REPORTS

Four County Medico-Dental Society: The Four County Medico-Dental Society met in quarterly session Tuesday night, May 23, 1944, Marion, Crittenden County, with supper served at the Methodist Church. The president, John G. White, Cerulean, called the meeting to order and the minutes of the last meeting, held in Princeton, February 22, 1944, were read and approved.

A motion prevailed without a dissenting vote instructing the Secretary to write to Gov. . . Willis asking that he amend his call for a special session of the State Legislature to include an appropriation of sufficient funds to build tuberculosis hospitals, one in each district provided by law, and to include a provision in the call for adequate maintenance of the State Tuberculosis Hospital at Hazelwood.

The following were in attendance: Physicians: John G. White, G. E. Hatcher, Cerulean; J. O. Nall, L. A. Crosby, T. A. Frazer, Marion; E. N. Futrell, Cadiz; Paul L. White, Pembroke; W. C. Haydon, Frank T. Linton, W. L. Cash, Princeton; R. E. Cardwell, Providence; D. L. Vaughn, Morganfield; Major Paul N. Ivins, M. C., Capt. Chas. L. Schneider, M. C., Camp Breckenridge. Dentists: P. J. Frazar, Marion; C. H. Jaggers, Power, Wolfe, Princeton; Rev. J. R. Noland, Pastor, Marion Methodist Church, Mr. A. L. Baily, Morganfield Hospital; W. H. Franklin, N. G. Guess, Marion Hospital Committee, Cpl. W. J. Laughren and Pfc. Wm. Milan, Camp Breckinridge.

The program was under the supervision of T. A. Frazer and consisted of a discussion of "South Pacific Experience" by Maj. Paul Ivins and "Venereal Diseases in the Army" by Capt. Schneider. Following the scientific program Messrs. Laughren and Milan delighted the group with some clever legerdemain after which those in attendance repaired to the new Marion hospital, nearing completion, for an inspection of the building.

The next meeting of the Society will be in Lyon County on the fourth Tuesday night in August with C. P. Moseley, Eddyville, in charge of arrangements.

W. L. Cash, Secretary.

Jefferson: The 881 stated meeting of the Jefferson County Medical Society, which was a joint meeting with the Louisville Dental Society, was held Monday evening, May 1, with 46 members and guests present. The President called the meeting to order at 8:18.

The President announced that it had been necessary to change the date of the next meeting from May 15 to May 22, which will be a dinner meeting at the Pendennis Club in order to suit the convenience of the guest speaker, Geza de Takats, M. D.

The Program Committee was authorized to phone members or use any other means to stimulate interest for the meeting at Fort Knox, June 5th.

New members elected are: Patrick W. Cummins, M. D., David I. Glass, M. D., and Joseph H. Goldcamp, M. D.

Scientific Program: 8:35.

Subject: "Common Areas in Medicine and Dentistry." Dr. John T. O'Rourke, Dean, University of Louisville School of Dentistry.

Discussion by J. G. Sherrill, O. O. Miller, Harry Weeter, E. C. Hume, A. W. Moore, C. C. McCoy, with closing remarks by the essayist.

R. T. Hudson, Secretary.

Jefferson: The 882nd stated meeting of the Jefferson County Medical Society was held on Monday evening, May 22nd, with a dinner at the Pendennis Club. Refreshments were served at 6:30 and dinner at 7:00 P. M.

J. Garland Sherrill, Chairman of the Necrology Committee read resolutions on the death of Virgil E. Simpson.

The speaker of the evening, Geza deTakats, Professor of Surgery, University of Illinois College of Medicine, spoke on the "Problem of Thrombo-Embolism," and showed lantern slides. The meeting adjourned at 9:30 P. M.

R. T. Hudson, Secretary.

Madison: The regular monthly meeting of the Madison County Medical Society was held in Draper Hall, Berea College on May 11, 1944 at 7:30 P. M. Dr. Robinson presiding. Eight members were present.

The applications of Drs. Young, Melton and Taylor were presented to the society with the endorsements and approval of the society. They were unanimously elected to membership in the society.

The minutes of the previous meeting were approved as read.

Scott McGuire was the speaker of the evening. He gave a review of a paper given by F. M. Massie, Lexington, on the treatment of adhesions treated by surgery and intra-abdominal instillations of heparin, which had been presented to the Fayette County Medical Society on May 9th. He also gave a very good paper on the "Indications for Caesarian Section, and the use of Caudal Anaesthesia."

The discussion was opened by J. W. Armstrong, Berea, and was actively participated in by all members. M. M. Robinson, Richmond, reported two ectopic pregnancies delivered by section. The meeting adjourned at 9:15 P.M.

Frank M. Melton, Secretary.

Perry: The regular monthly meeting of the Perry County Medical Society was called to order by the President, Z. M. Abshear, at 8:00 P. M. in the Health Department offices Monday, June 12, 1944.

The minutes of the previous meeting were approved as read.

Dr. Dana Snyder mentioned the fact that a Tuberculosis Hospital had been approved for the Eastern Section of Kentucky and suggested that a committee be appointed to try to get the Hospital located in this section. The following members were appointed to serve on this Committee: Drs. Collins, Gingles, and Snyder, County Judge J. A. Smith.

Dr. Allen E. Grimes, Lexington, was the guest speaker for this meeting and his subject was, "Carcinoma of the Colon." His paper was very interesting and instructive and was discussed by various members. .

The following members were present: Drs. C. S. Jackson, C. Dana Synder, J. P. Boggs, C. L. Combs, H. K. Knoch, L. H. Wagers, Z. M. Abshear, A. W. Adkins, R. L. Collins, H. V. Stewart, Paul W. Gutsche, B. M. Brown, H. W. Gingles, C. B. Snyder, and Judge J. A. Smith. The society has changed back to the original second Monday evening in each month.

J. P. Boggs, Secretary.

Scott: The regular monthly meeting of the Scott County Medical Society was called to order by the President, L. F. Heath, at the John Graves Ford Memorial Hospital on June 1st with the following members present: Drs. L. F. Heath, P. H. Crutchfield, S. S. Amerson, E. C. Barlow, A. F. Smith, W. S. Allphin, H. V. Johnson and Donald Thurber, the newly elected Health Officer for Scott County. Minutes of previous meeting read and approved.

An interesting case report written by Major Fred W. Wilt was read describing the use of Penicillin in the case of Osteo-Myelitis of the arm. He described in detail the dosage and method of administration and the final outcome of the case.

Following the reading of this paper a round table discussion was held and E. C. Barlow gave a talk on the history of the discovery and manufacture of Penicillin.

P. H. Crutchfield also made a report on a patient who had undergone an exploratory operation whom they found to have carcinoma of the pancreas.

Donald Thurber formerly of Carroll County, the newly elected Health Officer of Scott County, was introduced to the Society and was invited to return to our next meeting.

There being no further business the meeting adjourned to meet the first Thursday in July.

H. V. Johnson, Secretary

SCIENTIFIC EXHIBIT

The extraordinary demands upon the physician's time occasioned by the shortage of physicians did not, in any way, interfere with the success of the Scientific Exhibit at the Louisville meeting in 1943. In fact it attracted as much attention as any part of the program, and most of the doctors voted it as being one of the most interesting they had ever attended which was equal to a postgraduate course.

This year we plan to have just as interesting an exhibit at Lexington. If you have any exhibit or any collection of interesting specimens that you would like to contribute towards this meeting, please make your application to C. W. Kavanaugh, Chairman, Lexington Clinic, Lexington. Other members of the Committee on Scientific Exhibits are Drs. Harry M. Weeter, and Gordon S. Buttorff, Louisville.

NEWS ITEMS

At the Annual Meeting of the American College of Chest Physicians held at Chicago, Illinois, June 10-12, 1944, Dr. Benjamin L. Brock, Waverly Hills Sanatorium, Waverly Hills, Kentucky, was reelected as the Governor of the College for a term of three years.

Former head of the Department of Surgery, University of Louisville Medical School, Dr. R. Arnold Griswold, has been made a full colonel, the War Department announced.

Colonel Griswold, a Naval aviator in World War I, was commissioned a major in August, 1942. He was director of surgical service at General and Red Cross Hospitals.

Commander Sam A. Overstreet is at home in Louisville on leave after serving in Casablancha for thirteen months.

Lieut. Colonel J. D. Hancock is home for a short stay before reporting to the 160th Evacuation Hospital, Camp Forrest, Tenn.

Captain Meyer M. Harrison is Flight Surgeon at the Nashville Army Air Center, Nashville, Tenn.

Major Samuel S. Gordon is commanding officer of a 300-bed hospital in North Africa. His brother, Captain Abraham M. Gordon, has arrived in England with the 15th Hospital Center.

Captain J. A. Bowen has reported for duty at the U. S. Naval Hospital, Seattle, Wash.

Lieut. John W. Fish is on duty in the South Pacific area.

Major Henry B. Asman has arrived in England.

Dr. Jesshill Love, who is somewhere overseas, was recently promoted to Commander.

Major Charles L. Roser is with the 4th Emergency Rescue Squadron, Keesler Field, Biloxi, Miss.

Capt. Courtland Beeler, M. C., died in England April 9, 1944.

The Army-Navy E was awarded to the Louisville Red Cross Donor Service on Friday, June 30th. Brigadier General Fred W. Rankin, Lexington, now chief consultant in surgery to the U. S. Army, Washington, D. C., was the principal speaker. Colonel Arnold Griswold, Louisville, U. S. Army chief of surgical service at Walter Reed Hospital represented the Surgeon General's Office at the ceremony. Colonel Griswold, a naval aviator in World War I, was former head of the department of Surgery at the University of Louisville Medical School.

Dr. Milton Lopez Henriques, Director of Local Health Services for the Ministry of Health of Venezuela, is spending two months in Kentucky familiarizing himself with the public health program in this State. Doctor Lopez is here under the auspices of the Rockefeller Foundation and has just completed a year in the Johns Hopkins School of Hygiene. He is particularly interested in the State maternal and child health program since the maternal and child health death rates in Venezuela are very high.

Dr. Lopez will spend five weeks with the health departments in Fayette, Pulaski and Henderson Counties. The remaining three weeks will be spent in the State Health Department and with the Louisville and Jefferson County Health Department.

BOOK REVIEWS

PRACTICAL MALARIA CONTROL, a handbook for Field Workers by Carl E. M. Gunther, M. D., B. S., D. T. M. (Sidney) Field Medical Officer, Bulolo Gold Dredging Limited, Territory of New Guinea, at present with the Australian Medical Corps. Foreword by Prof. Harvey Sutton, O. B. E., M. D., F. R. A. C. P., B. Sc. D. P. H., F. R. Sand. Philosophical Library, New York, Publishers. Price $2.50.

Dr. Carl Gunther has spent many years as Medical Officer of a large industry in the Mandated Territory of New Guinea. There at Bulolo is the centre of the gold dredging, right in the midst of the tropical jungle, and in a

prisoner in the hands of the enemy.

This book is invaluable for the practitioner who meets malaria for the first time, for the specialist it is of the greatest interest. The problem of malaria, its prevention and its treatment is one of the outstanding problems of tropical life. Over five million of this disease every year. Economic disaster awaits neglect of preventive measures.

INDUSTRIAL OPHTHALMOLOGY — By Hedwig S. Kuhn, M. D., Hammond, Indiana, with 114 text illustrations, including 2 plates. C. V. Mosby Company, Publishers, St. Louis. Price $6.50.

The author is qualified to write authoritatively on this subject because of her keen interest and years of experience in the many phases of the problem of vision in industry which is becoming constantly more complicated and important.

Toxic hazards that cause injuries to the eye are multiple and are of tremendous importance. This volume discusses all phases of this important subject and the information is arranged in the book for immediate practical use. Dr. Kuhn's association with the Department of Industrial Psychology at Purdell University with extensive research conducted there in related fields of psychology and vision and her work on committees which have been studying all the numerous problems of vision in industry contribute to making this first comprehensive exposition of industrial ophthalmology a useful and authoritative treatise.

MEDICAL DIAGNOSIS—By Roscoe L. Pullen, A. B., M.D., Instructor in Medicine, Tulane University, Louisiana School of Medicine; Assistant Clinical Director, Charity Hospital of Louisiana at New Orleans; formerly Fellow in Clinical Endocrinology, Duke University School of Medicine and Duke Hospital, Durham, North Carolina. With a foreword by John H. Musser, B. S., M. D., F.A.C.P., Professor of Medicine, Tulane University of Louisiana School of Medicine; Senior Visiting Physician, Charity Hospital of Louisiana at New Orleans. 1106 pages with 584 illustrations and 12 colored plates. Philadelphia and London: W. B. Saunders Company, 1944. Price $10.00.

This book was written to meet a need, long felt, for a safe and sure guide on medical diagnosis that would include more than just the usual cardinal material found in most books on diagnosis. It is a book in which diagnosis is considered in direct relationship to altered body states, whether physiologic or anatomic, explains, epitomizes and summarizes the complete examination of the entire body of the sick person.

The 27 contributing authorities who wrote this book have not been content with simply teaching the examination of the part or system affected, but stress the necessity of mastering the examination of the entire body as a whole in order to translate better the findings into a well-considered and accurate diagnosis. To this end, they give not only the four cardinal methods of physical diagnosis, but include also endoscopic, roentgenographic, fluoroscopic and histologic procedures—in fact, everything short of the laboratory.

Beautifully illustrated with 863 illustrations on 584 figures, 45 in colors, replete wth tables, summaries, charts and many valuable quick-reference aids, this new book may be truly said to be dedicated to the principle: A good clinician must first be a good diagnostician.

SYNOPSIS OF DISEASES OF THE HEART AND ARTERIES—By George R. Herrmann, M. S., M. D., Ph. D., F.A.C.P. Professor of Medicine, University of Texas, Director of Cardiovascular Service, John Sealy Hospital, Consultant in Vascular Diseases, U. S. Marine Hospital. Third Edition with 103 text illustrations and 4 color plates. C. V. Mosby Company, Publishers, St. Louis. Price $5.00.

As diseases of the cardio vascular system are the leading causes of death, this book should be on every doctor's desk. It is in convenient size for the desk and for ready references. The illustrations have been used where ever they help to visualize and assist in making clear the message conveyed in the text. In compilation of this hand book the author has been guided by his own experience and has followed the outlines of his lectures to medical and postgraduate students.

SYNOPSIS OF NEUROPSYCHIATRY—By Lowell S. Selling, Sc. M., M. D., Ph. D., Dr. P. H., Director, Psychopathic Clinic, Recorder's Court, Detroit, Associate Attending Neuropsychiatrist, Eloise Hospital, Adjunct Attending Neuropsychiatrist, Harper Hospital. C. V. Mosby Company, St. Louis, Publishers. Price $5.00.

This volume is written so as to be a simplified, systematic coverage of the branch of medicine which is so bewildering to the general practitioner. Its subjects are so arranged he can see at a glance the choice in diagnosis and their cardinal signs.

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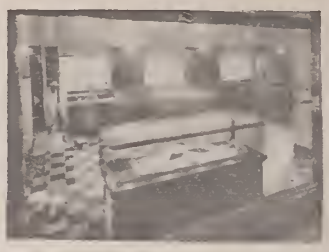
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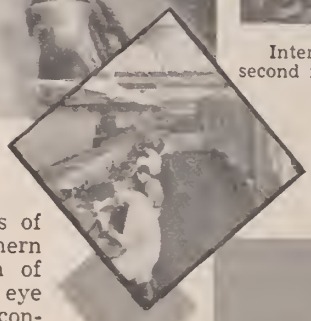
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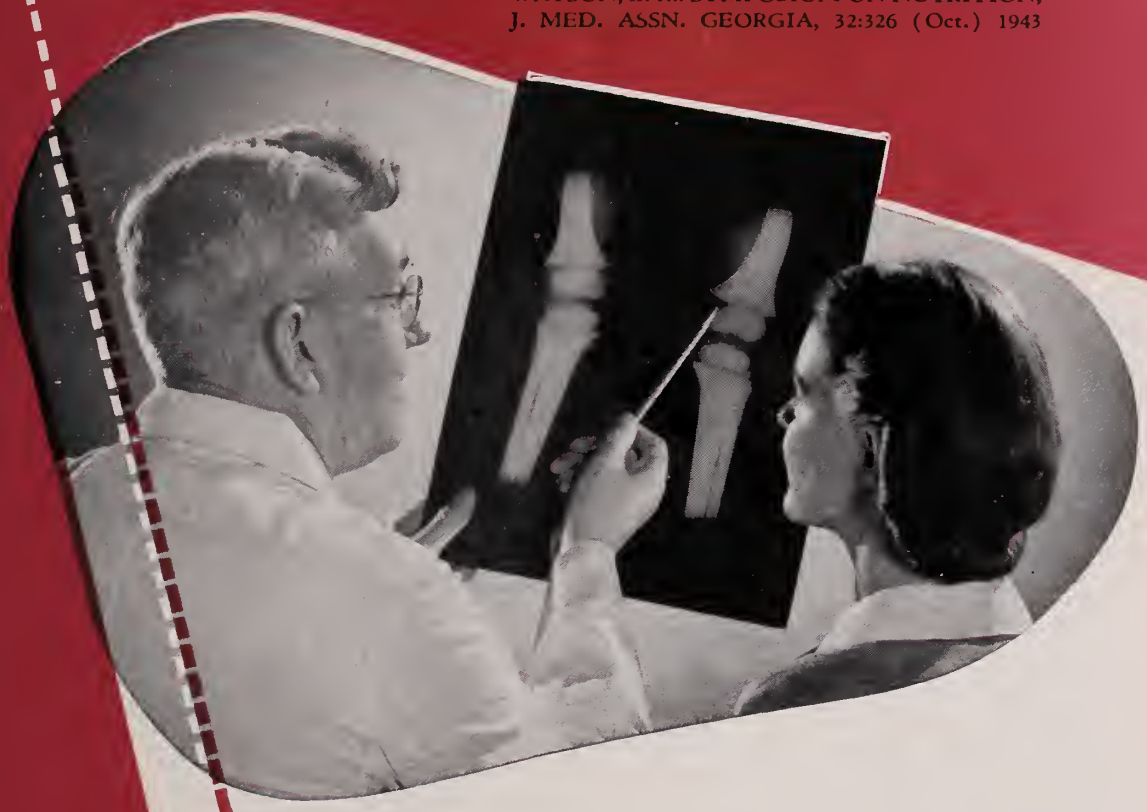
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*Romeo, Z. J.: Sulfur and Soap as Effective Prophylaxis Against "Chiggers" (Red Bugs) in the Army, Mil. Surgeon. *90:* 437-439 (April) 1942.

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WATSON, E. R.: SYMPOSIUM ON NUTRITION,
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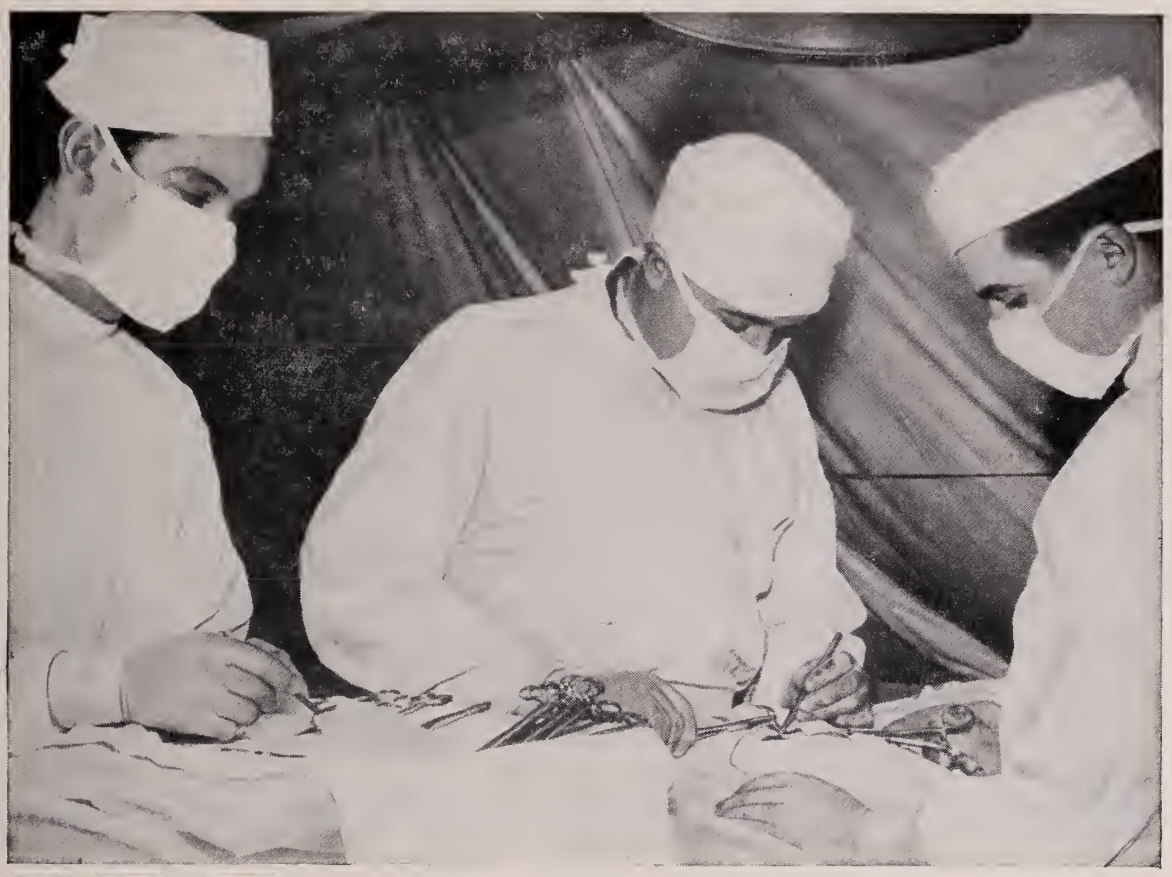
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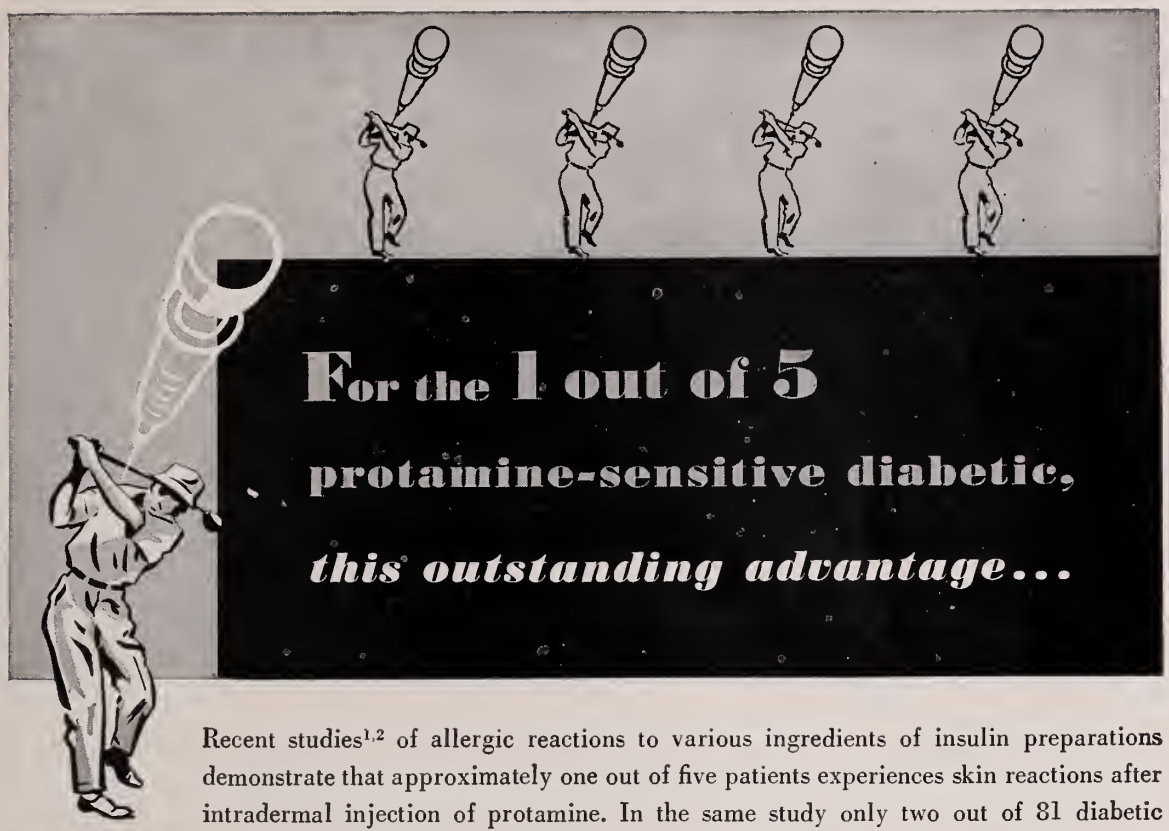


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(1) Page, R. C., and Bauman, L.: J.A.M.A. 124:704 (March 11) 1944. • (2) Bauman, L.: Bull. N. E. Med. Cen. V:17-21 (Feb.) 1943. • (3) Bauman, L.: Am. J. Med. Sc. 198:475 (Oct.) 1939, ibid. 200:299, 1940. • (4) Duncan, G. G., Diseases of Metabolism, Phila., Saunders Co., 1942, p. 782.

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COUNTY SOCIETY REPORTS

Daviess: The Daviess County Medical Society held its regular semi monthly meeting at the Hotel Owensboro on Tuesday evening, May 23rd. After a fine dinner the meeting was called at 6:30 P. M. On this occassion no new or unfinished business was taken up. Paul D. Crim, Medical Director of the Boehne Sanitorium, Evansville was the guest speaker on the program. His subject "Pulmonary Tuberculosis" was presented in the form of an illustrated lecture with lantern slides. The subject was approached from the control and preventive, as well as the diagnostic and clinical treatment aspects and proved to be both interesting and profitable to all who had the privilege of hearing the speaker. A large majority of the membership and a number of guests were in attendance at the program.

Frank J. Condon. Secretary.

Fulton: The annual meeting of the Fulton County Medical Society was held in Hickman. The following officers were elected: President, J. T. Baker; Vice President, David L. Jones; Secretary-Treasurer, J. G. Samuels; Delegate, J. G. Samuels; Board of Censors: J. C. Morrison, R. L. Bushart, Geo. A. Crafton.

J. G. Samuels, Secretary.

Hopkins: A dinner meeting of the Hopkins County Medical Society was held at the Methodist Church at 6.30 P. M., June 15, 1944. The program consisted of an address by J. G. Gaither, Hopkinsville, entitled "When to Operate."

Those present were: Drs. C. B. Johnson, J. D. Sory, J. G. Gaither, T. R. Finley, A. F. Finley, W. M. Moore, J. R. Corum, C. R. Morton, R. F. Robinson, M. S. Veal, and Wm. H. Garnier.

W. H. Garnier, Secretary.

Letcher: The Letcher County Medical Society held its regular monthly meeting, June 27, 1944, Fiscal court room, court house, Whitesburg.

Members present, Drs. E. K. Munn, H. H. Howze, T. M. Perry, Richard F. Brady, L. L. Wommack, John L. Clay, Owen Pigman.

Business being disposed of, there followed a general discussion of events of the day. E. K. Munn made a motion that the Whitesburg physicians select a delegate and alternate to represent the society at the Kentucky State Medical meeting, Lexington, the motion was approved.

Also a motion carried to omit the July and August meetings, and the next session be called at the regular designated time, last Tuesday in September.

Owen Pigman, Secretary.

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Invert the vial and syringe (with needle in vial), and withdraw the amount of penicillin solution required for the first injection.



Store vial with remainder of solution in refrigeratar. Solution is ready for subsequent injections during the next 24 haurs.

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in the customary manner, inject into the vial 20 cc. of pyrogen-free, sterile physiologic salt solution; without removing the needle invert vial and withdraw as many cc. of this 5000 units per cc. solution for the injection that is to be made immediately; store the vial with its remaining solution in the refrigerator—it is ready for use when the next injection is to be made.

The concentration withdrawn from the vial is 5000 units per cc. If a lower concentration is desired, modification is easily accomplished.

If you have not as yet received a copy of the "Penicillin-C.S.C. Therapeutic Reference Table," showing dosages, modes of administration, and duration of treatment required in the various infections in which penicillin is indicated, write for a complimentary copy now. You will find it a valuable aid in familiarizing yourself with penicillin therapy.

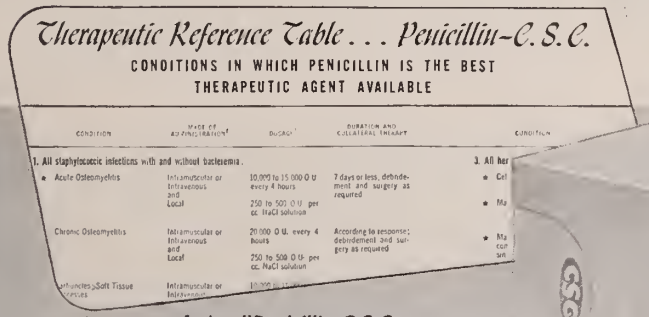
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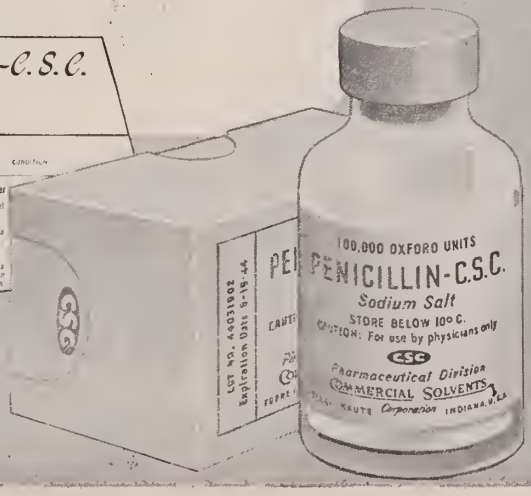
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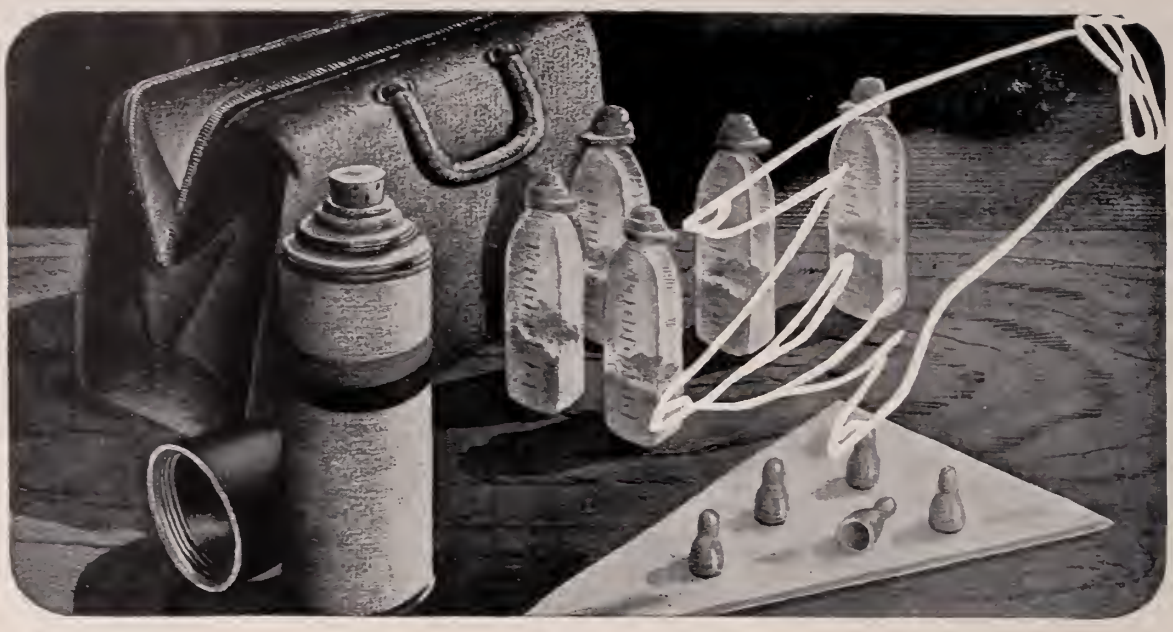
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CALENDAR OF COUNTY SOCIETY MEETINGS

COUNTY	SECRETARY	RESIDENCE	DATE
Adair	W. Todd Jefferies	Columbia	August 2
Allen	A. O. Miller	Scottsville	August 23
Anderson	J. B. Lyen	Lawrenceburg	August 7
Ballard	F. H. Russell	Wickliffe	
Barren	C. R. Markwood	Glasgow	August 16
Bath	H. S. Gilmore	Owingsville	August 14
Bell	Edward S. Wilson	Pineville	August 11
Boone	R. E. R le	Walton	August 16
Bourbon	Geo. M. Jewell	Paris	August 17
Boyd	Price Sewell Jr.	Ashland	August 1
Boyle	P. C. Sanders	Danville	August 15
Bracken-Pendleton	W. A. McKenney	Falmouth	August 24
Breathitt	M. E. Hoge	Jackson	August 15
Breckinridge	J. E. Kincheloe	Hardinsburg	
Bullitt	Geo. B. Hill	Mt. Washington	
Butler	D. G. Miller, Jr.	Morgantown	August 2
Caldwell	W. L. Cash	Princeton	August 1
Calloway	J. A. Outland	Murray	August 3
Campbell-Kenton	Robt. L. Bi'tz	Newport	August 3
Carlisle	E. E. Smith	Bardwell	August 1
Carroll	H. Carl Boylen	Carrollton	
Carter	Don E. Wilder	Grayson	August 8
Casey	Wm. J. Sweeney	Liberty	August 24
Christian	H. B. Stone	Hopkinsville	August 15
Clark	W. Carl Grant	Winchester	August 18
Clay	L. H. Wagers	Manchester	August 8
Clinton	S. F. Stephenson	Albany	August 19
Crittenden	C. G. Moreland	Marion	August 14
Cumberland	W. F. Owsley	Burkesville	August 2
Daviess	Frank J. Condon	Owensboro	August 8 & 22
Estill	Virginia Wallace	Irvine	August 9
Fayette	Chas. D. Cawood	Lexington	August 15
Fleming	Roy Orsburn	Flemingsburg	August 9
Floyd	Robert Sirkle	Weeksbur'	August 30
Franklin	E. K. Martin	Frankfort	August 3
Fulton	John G. Samue's	Hickman	August 9
Gallatin	J. M. Stallard	Sparta	August 17
Garrard	J. E. Edwards	Lancaster	August 17
Grant	Wallace Byrd	Williamstown	August 16
Graves	H. H. Hunt	Ma field	August 1
Grayson	E. B. Deweese	Caneyville	
Green	S. J. Simmons	Greensburg	August 7
Greenup	Virgil Skaggs	Russell	August 11
Hancock	F. M. Griffin	Hawesville	August 7
Hardin	D. E. McClure	Elizabeth'own	August 10
Harlan	W. R. Parks	Harlan	August 19
Harrison	W. B. Moore	Cynthiana	August 7
Hart	Vincent Carrao	Munfordville	August 1
Henderson	Walter L. O'Nan	Henderson	August 14 & 28
Henry	Owen Carroll	New Castle	August 10
Hickman	H. E. Titsworth	Clinton	August 3
Hopkins	Wm. H. Garnier	Madisonville	August 10
Jefferson	Richard T. Hudson	Louisville	
Jessamine	J. A. Van Arsdayy	Nich'asville	August 24
Johnson	Paul B. Hall, Act. Sec.	Paintsville	August 28
Knox	T. R. Davies	Barbourville	August 17
Laurel	Oscar D. Brock	London	August 9
Lawrence	L. S. Hayes	Louisa	August 21
Lee	A. B. Hoskins	Beattyville	August 12
Letcher	Owen Pigman	Whitesburg	August 29
Lewis	Elwood Esham	Vanceburg	August 21
Lincoln	Lewis J. Jones	Houstonville	August 18
Livingston	T. L. Radcliffe	Smithland	
Logan	E. M. Thompson	Russellville	
Lyon	H. H. Woodson	Eddyville	August 1
McCracken	Leon Higdon	Paducah	August 23
McCreary	R. M. Smith	Stearns	August 7
McLean	F. L. Johnson	Livermore	August 10
Madison	F. M. Melton	Richmond	August 17
Magoffin	Lloyd M. Hall	Salyersville	

COUNTY	SECRETARY	RESIDENCE	DATE
Marion	Nelson D. Widmer	Lebanon	August 22
Marshall	S. L. Henson	Benton	August 16
Mason	C. W. Christine	Maysville	August 9
Menifee	E. T. Riley	Frenchburg	
Mercer	J. Tom Price	Harrodsburg	August 8
Metcalfe	E. S. Dunham	Edmonton	August 1
Monroe	Geo. E. Bushong	Tompkinsville	
Montgomery	D. H. Bush	Mt. Sterling	August 8
Muhlenberg	E. L. Gates	Greensville	August 8
Nelson	W. Keith Crume	Bardstown	
Nicholas	T. P. Scott	Carlisle	August 21
Ohio	Oscar Allen	McHenry	August 2
Owen	K. S. McBee	Owenton	August 3
Owsley	W. H. Gibson	Booneville	August 7
Perry	J. P. Boggs	Hazard	August 14
Pike	S. B. Casebolt	Pikeville	August 3
Powell	I. W. Johnson	Stanton	August 7
Pulaski	Robt. G. Richardson	Somerset	August 10
Robertson	L. T. Lanham	Mt. Olivet	
Rockcastle	Robt. G. Webb	Livingston	August 4
Rowan	I. M. Garred	Morehead	August 14
Russell	J. R. Popplewell	Jamestown	August 14
Scott	H. V. Johnson	Georgetown	August 3
Shelby	C. C. Risk	Shelbyville	August 17
Simpson	N. C. Witt	Franklin	August 8
Spencer	M. H. Skaggs	Taylorsville	
Taylor	L. S. Hall	Campbellsville	August 10
Todd	B. E. Boone, Jr.	Elkton	August 2
Trigg	Elias Futrell	Cadiz	
Union	E. Bruce Underwood	Morganfield	August 1
Warren-Edmonson	Paul Q. Peterson	Bowling Green	August 9
Washington	J. H. Hopper	Willisburg	August 16
Wayne	Frank L. Duncan	Monticello	
Webster	C. M. Smith	Dixon	August 25
Whitley	C. A. Moss	Williamsburg	
Wolfe	John L. Cox	Campton	August 7
Woodford	George H. Gregory	Versailles	August 3

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Thiamine Hcl.	5 Mg.
Thiamine Hcl.	10 Mg.
Ascorbic Acid	25 Mg.
Ascorbic Acid	50 Mg.
Ascorbic Acid	100 Mg.
Riboflavin	1 Mg.
Riboflavin	5 Mg.
Niacin	20 Mg.
Niacin	50 Mg.
Niacin	100 Mg.
Niacinamide	20 Mg.
Niacinamide	50 Mg.
Niacinamide	100 Mg.

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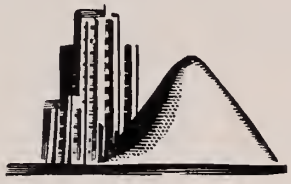
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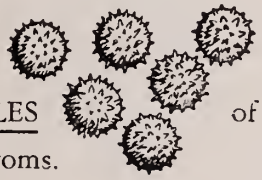
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As few as 6 PARTICLES of ragweed pollen can produce hay fever symptoms.

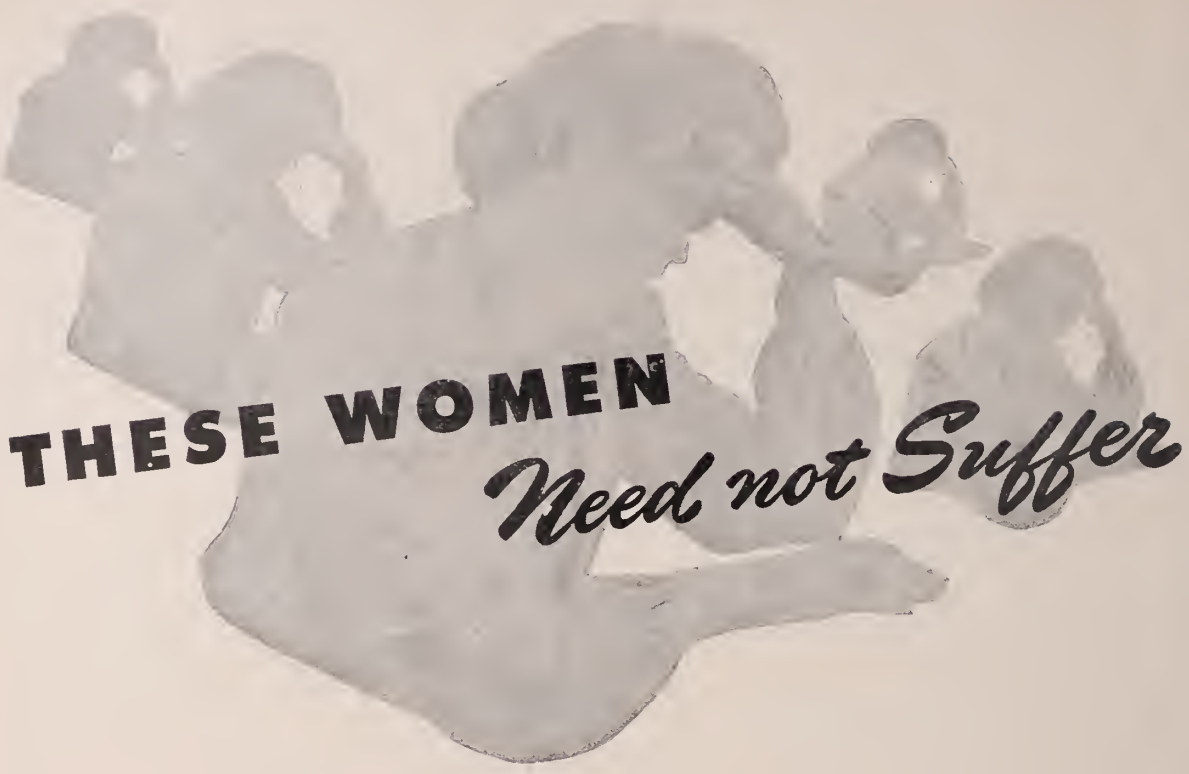
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ARTHUR THOMAS MCCORMACK, M. D.

KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

Published Under the Auspices of the Council

VOL. 42, NO. 8 BOWLING GREEN, KY. AUGUST, 1944

IN MEMORIAM

Arthur Thomas McCormack, M. D.

Arthur McCormack lived a full life, both in the enjoyment of it and in a long and useful service to his fellow man. His heritage of personality characteristics was far above the average. Those who knew intimately his charming mother observed the finest qualities that make for beautiful marital relations and noble motherhood. She was possessed of a fine intellect, a wonderful poise, a kindly disposition, a rare sense of humor, and a great pride in the distinguished careers of her husband and only son. Likewise, those who were fortunate enough to know his father intimately recognized in his personality and attainments a truly great man. Strong in character, versatile in the knowledge of men, firm in his principles of private and public responsibilities, keenly analytical of his profession in its obligation to provide good leadership in the fields of medical practice and public health, patient and tolerant toward others, determined in his ambition to accomplish everything possible in service to humanity, he cultivated a rare father and son relationship, in order to inculcate in the latter his own ideas and ideals of man's relation to man. Serving his people in a public capacity for forty-one years, Dr. J. N. McCormack forged a pattern that the son Arthur never lost sight of and was proud to follow.

It was the privilege of the writer to know both intimately through many years of personal and official association. It is, therefore, impossible fully to pay tribute to our friend Arthur without recalling the great contribution to his character and training made by these extraordinary parents. Like Abou Ben Adhem, Arthur loved his fellow men, and his love was universal. There were, however, among his acquaintances, over the years, many for whom he had a deep and abiding personal affection; some were of family connection, some his professional associates, while others were those in public life with whom he counseled and worked for the common good. Out of the latter group one man holding a high position in our national government may be quoted as saying when learning of Dr. Arthur's death—"I never knew a man wiser in counsel, more lovable in personality or as loyal in friendship," adding, "I could never have loved a brother more," and with the latter statement this strong man wept like a child. Very few men knowing Arthur failed to see the lovable side of him. Doctor Arthur, like his father, was also a patient and tolerant man. He fought hard to secure for his profession and his public laws designed to make for human betterment. In this he often had to counter professional and political personal interests, but he had that give-and-take that made him charitable either in victory or defeat. He disliked and disdained the title of "politician" either for himself or others, because it was his be-

lief that most men seeking public opportunity for service aspired to statesmanship rather than mere political preferment. In his public career he had to make many decisions and issue public orders that were bitterly resented, but he cloaked his reactions with that same mantle of charity and tolerance which he becomingly wore always, privately and publicly.

Doctor Arthur was filled with the zest of living. He enjoyed his friends. Those close to him recall that never a day passed that he did not want someone to arrange for some social or recreational diversion, and he was always the playboy—"the life of the party." With a quick and ready wit, he was a great entertainer and loved repartee in conversation; few men had such a fund of native stories and folk lore to draw upon for illustration in private conversation or public addresses. With a mind that was always acutely active, he had an imagination that visualized the humorous and the serious and never hesitated to capitalize on this "to point a moral or adorn a tale." When sometimes chided for exaggeration he was wont to reply that "a single fact never made as good an illustration as composite facts gleaned from corresponding sources and experiences." He was always equally at ease with the young and old, men and women, and in private or public life.

Doctor McCormack was much in the public eye because of his outstanding ability as an executive and his almost uncanny foreknowledge of what was going to result from any line of policy. He was thus an exceptionally wise counsellor and was always in demand by those in authority who planned new measures, or who wanted help in getting out of "messes" into which they had fallen.

So varied were these activities on State and national levels that few would venture to appraise them all, though many in high places have contributed their bit to the picture. His public contributions have been so outstanding that more intimate relationships have been overlooked. It is high time that something be recorded about the human being as he appeared to those who knew him best. He was no "mollycoddle" and would not allow those who associated with him to lapse from a high plane of life. He was conscious of the limitations of many of his friends and did not expect the impossible of them, but he trusted them to do the jobs which he gave them; only rarely would he intervene in one's program, and then only to help by wise advice or suggestion.

He was so loyal and unselfish in his devotion to his life's work that he could not understand some natures with which he came in contact. He was too big to have personal resentment against those who tried to betray him, and to our definite knowledge he often helped those who were most critical of him and his plans. He stood up for his friends when it cost him something and held no resentment against those who failed him.

He had that warm Irish heart that took in the whole group of those who labored with him, and somehow got over to each one that he was interested in all that concerned that person. He seemed glad of the opportunity to do something for anyone who craved his help, and he was so wise and efficient that he usually solved the problem for the one in trouble.

No man has ever lived who more loved his native State and its people and who gave more unstintingly of his strength and abilities for his ideal for his people.

P. E. Blackerby, M. D.

EDITORIALS

Arthur Thomas McCormack

Journal of A. M. A.

In all work in the field of public health in America Dr. McCormack was prominent. His death concluded more than thirty years as secretary of the Kentucky State Board of Health. He had been president of the American Public Health Association in 1937, special consultant of the U. S. Public Health Service, and organizer and dean of the School of Public Health of Kentucky. He had been president of the Conference of State and Provincial Health Authorities of North America, and he was a member of the National Tuberculosis Association, Gorgas Memorial Institute and the National Health Council. His most important recent activity was the presentation of a report on the establishment of full time county health departments, published in The Journal. In his public life Dr. McCormack had been president of the Kentucky Conference of Social Work, and he was State flood director for the flood which menaced Kentucky in 1937.

In the field of organized medicine Dr. McCormack was prominent as secretary of the Kentucky State Medical Association for many years. He founded the Kentucky Medical Journal in 1901 and was subsequently director and editor. He was a fellow of the American College of Surgeons and of the American Medical Association. He served in the House of Delegates from 1908 to 1914, 1916-1917, 1919 to 1931, in 1935 and again from 1937 to 1943 inclusive. During these years he gave of his time and thought on many occasions to the many reference committees to which he was assigned and in which he was especially efficient because of his many years of service. He was president-elect of the Southern Medical Association in 1939 and president in 1940. During recent years he had spent much time in Washington acting in an advisory capacity to several government agencies. For his work in the field of public health and education he was honored with the M. A., from Bethel College at Russellville, Ky., in 1900, the degree of Dr. P. H. from Detroit College of Medicine and Surgery in 1925, the degree of D. Sc. from Berea, (Ky.) College in 1926, and LL. D. from Transylvania University in 1930. The literary contributions of Dr. McCormack included many editorials and articles for the Journal which he edited. He wrote also a book entitled "Course in Physical Education for the Common Schools of Kentucky," published in 1920. His heredity, statesmanship, idealism and devotion to the public good and to public service made Dr. McCormack a notable figure in American medicine.

Arthur Thomas McCormack

Southern Medical Journal

The death of Dr. Arthur Thomas McCormack ended what was probably the longest dynasty in public health history; for he and his father, Dr. J. N. McCormack, were the State Health Commissioners of Kentucky continuously for sixty-four years. The father had been active in organizing the American Medical Association, and served on the Organization Committee with Dr. George H. Simmons, of Chicago, and Dr. P. Maxwell Forshee, of Cleveland, at the St. Paul Meeting in 1901, thus playing an important part in rejuvenating and reshaping the greatest of all medical organizations.

Dr. Arthur T. McCormack was born in the hills of Nelson County, Kentucky, August 21, 1872, the son of a country doctor who was destined to play an important part in public health and medical organizations. After having finished the public schools, Arthur McCormack took an A. B. degree at Ogden College in Bowling Green. Then there was further academic work at the University of Virginia. Next he was graduated from the College of Physicians and Surgeons of Columbia University with an M. D. in 1896. His internship was served in Paterson, N. J. After that he entered general practice with his father in Bowling Green in the horse and buggy era. Later he established St. Joseph's Hospital, the only hospital in those days between Louisville and Nashville.

He served as Health Officer of Warren County from 1897 till 1900, and as assistant State Health Commissioner and member of the State Board of Health. On the death of the elder McCormack in 1922, Dr. Arthur was elevated to the position

of State Health Commissioner. He was one of the founders of the American College of Surgeons and a life member. He organized Base Hospital No. 59 in World War I but was sent to Panama for the duration of the war as Health Officer by Surgeon General William C. Gorgas.

For many years and up until the time of his death Dr. McCormack was secretary of the Kentucky State Medical Association and Editor of its mouth piece, the Kentucky Medical Journal. He was a delegate for many years to the American Medical Association, and was a member of most of the important public health and medical associations, many of which he served as president. In fact, his whole life was spent in working with, and for, organized medicine.

Dr. McCormack was an indefatigable worker, but was the soul of friendliness and an extrovert to a delightful extent. He loved his fellow man and he liked the society of his friends. As a raconteur he had few equals and as a speaker he was in constant demand. Except when dealing with extensive statistics he was never known to refer to a note. He used to say that when he arose to speak he had not the slightest idea what he was going to say.

Arthur McCormack had a good head on his shoulders; and it carried him far and won him success. But a much greater asset was his marvelous personality and his unusual faculty of making friends and holding those friendships. Throughout the years in Kentucky, whether the State was under a Republican or Democratic rule, Arthur McCormack never failed to secure the cooperation of the administration, and thus kept the State Health Department functioning smoothly and efficiently.

As might be expected, Dr. McCormack was the recipient of a number of honorary degrees, such as A. M., Sc. D., D. P. H. and LL.D.

Tall of stature, large of frame, with a huge head, a heavy shock of hair, a handsome face with a winning smile, and a heavy handshake, Dr. McCormack made friends and created admirers wherever he went. He was a great health officer, second to none in efficiency and in national influence. His untimely passing is a severe blow to American public health and to the thousands upon thousands who looked upon him as their personal friend.

Colonel Arthur T. McCormack M. R. C.

The Military Surgeon

Arthur Thomas McCormack, Colonel, Medical Reserve Corps, U. S. Army, died suddenly from coronary sclerosis on August 7 in his apartment in the Brown Hotel in Louisville. Colonel McCormack was born at Howard's Mill, Nelson County, Kentucky on August 21, 1872, the only child of Dr. Joseph Nathaniel and Corinne (Crenshaw) McCormack. Following graduation from Ogden College in Bowling Green with the degree of A.B. in 1892 and a year in the University of Virginia, he entered the medical school of Columbia University in New York from which he graduated in 1896. Following an internship in the Paterson Hospital at Paterson, New Jersey, he returned to Kentucky and joined his father in a general practice in Bowling Green. Soon thereafter he was named health officer of Warren County and in 1898 he was appointed assistant secretary of the State Board of Health in the office of his father. When in 1912 the elder Dr. McCormack resigned the post of secretary of that body which he had held since 1883, the son gave up his surgical practice and took over the office. In 1918 he was given the added title of State Health Officer, later changed to Commissioner of Health. He carried out the duties incumbent upon this appointment to the end of his life.

Colonel McCormack like his father before him, was one of the most arresting figures in public health circles in the country. Among the offices of medical societies that he held was the presidency of the American Public Health Association in 1937. He was a fellow of the American College of Surgeons and a long time member of the House of Delegates of the American Medical Association. He founded the Kentucky Medical Journal in 1901 and was its editor for a number of years.

There will be written many accounts of Colonel McCormack's career in the field of public health, but few will tell of his military interests and experience. He was appointed in 1901, surgeon general of the National Guard of Kentucky, a post he held until 1908. In 1911 he was commissioned a first lieutenant in the Medical Reserve Corps of the Army. In 1917, incident to World War I he was promoted to the grade of major and assigned to organ-

ize Base Hospital No. 59 at Camp Greenleaf, Georgia. With the unit about to sail for European service, he was detached and sent by Surgeon General Gorgas to Panama as chief medical officer with the grade of lieutenant colonel. Among his achievements here was the completion of the Ancon (now Gorgas) Hospital. Subsequent to the war he was advanced to the grade of colonel in the Reserve Corps. He was one of the organizers of the Medical Veterans of the World War which shortly was merged with the Association of Military Surgeons. He was thereafter active in the affairs of the society and filled the post of general chairman of the exceptionally brilliant meeting in Louisville in November, 1941.

The National Defense Program in support of the present war brought a flood of responsibilities upon Colonel McCormack and upon his office. Knowing himself seriously sick he took the stresses upon himself without complaint. He was definitely a war casualty.

There are few among us who have attached to themselves so many devoted friends as did Colonel McCormack or who have so well deserved them. He was the soul of sincere friendliness and of selfless generosity. He built up in his office an organization conspicuous not only for efficient service, but for devotion and loyalty to their chief.

J.M.P.

Arthur Thomas McCormack

AN APPRECIATION

Bulletin, Federation of State Medical Boards of the United States

In the death of Dr. Arthur Thomas McCormack in Louisville August 7th, the Federation and the cause of medical licensure has lost one of its most stimulating and outstanding leaders. During more than a quarter of a century his attendance at the annual sessions of the Federation with his interesting discussions, rare touch of graceful humor and above all his spirit of companionship and fellowship has made each meeting memorable because of his presence.

As an officer and member of the executive committee he had a large part in guiding the Federation during its formative period of organization.

He was born in Nelson County, Kentucky, August 21, 1872, the son of Dr. Joseph N. McCormack, noted as one of the most important leaders in the reorganization of the American Medical Association.

He received his B. A. degree in 1892 from Ogden College at Bowling Green, Kentucky, and his M. D. degree from the College of Physicians and Surgeons, Columbia University, in 1896. Soon after entering the practice of medicine at Bowling Green he became interested in public health work in which field he was destined to gain national prominence and leadership.

In 1897 he was named health officer of Warren County and a year later he became assistant state health officer of the State of Kentucky, succeeding in 1912 to the position of state health commissioner which he held continuously to the time of his death. During World War I he was appointed health officer of the Panama Canal Zone and completed the building of the Ancon Hospital. He held the rank of Lieutenant Colonel.

During recent years he spent much time in Washington acting as an advisor to several governmental agencies. In this capacity he was influential in safeguarding federal legislation connected with public health and medical practice.

His eminence in the field of public health led to his election as president of the American Public Health Association in 1937. He had previously been president of the Conference of State and Provincial Health Authorities of North America, and was a special Consultant of the United States Public Health Service and member of the National Health Council.

He founded the Kentucky Medical Journal in 1901 and was subsequently director and editor and during the past thirty years has been the Secretary of the Kentucky State Medical Society.

As the division of medical licensure and registration is a part of the Kentucky State Department of Health, Dr. McCormack had the unique opportunity during thirty years of coordinating the interests of medical licensure, public health and those of the state medical society, an achievement which has no analogue in any other state in this country.

For his work in the fields of public health and education he was honored with the M. A, degree from Bethel College, Russellville, Kentucky, in 1900, that of Dr. P. H. from Detroit College of Medicine and Surgery in 1925, Doctor of Science from Berea (Kentucky) College in 1926 and that of LL.D. from Transylvania University in 1930.

His literary contributions included many editorials and articles for the journal which he edited, the Federation Bulletin, the American Journal of Public Health and other leading publications.

He served in the House of Delegates of the American Medical Association almost continuously since 1908, taking part in all important discussions and the work of reference committees to which he was assigned. He was particularly active in his last session in Chicago in June of this year.

He was elected president-elect of the Southern Medical Association in 1939 and served as president in 1940. He was a fellow of the American College of Surgeons, the American Medical Association and the American Public Health Association and a member of the National Tuberculosis Association and the Gorgas Memorial Institute.

Thus has come to a close a long life of labor and devotion to the public good and public service. A legion of friends and colleagues mourn the passing of Arthur McCormack—this notable figure in American medicine whose cheerful smile and charm of personality will linger as long as memory endures.

Arthur Thomas McCormack

EMMET F. HORINE, M. D.

In Kentucky Medical Journal

The sudden death of our beloved Secretary-Editor came as a shock to the physicians of Kentucky. Few knew he had serious heart disease, which dated back to 1934. He rarely complained, though he often jokingly referred to the fact that he was taking capsules, contents unknown to him, which had been prescribed by his physician. His work was his life, and the knowledge that he had serious cardiac involvement did not deter him from continuing his manifold duties, day and night, through floods, depressions, and epidemics. He said the day before his death, "If the present aggravation of my symptoms means that I must cease to serve, life holds nothing and I want to die."

The space at my disposal at present will not permit a review of all the numerous and important achievements of Dr. McCormack. However, it is hoped that a memorial number of this Journal may be issued later, which will commemorate his life and work.

The only child of Dr. Joseph Nathaniel and Corinne Crenshaw McCormack, Arthur Thomas was born at Howard's Mill, Nelson County, Kentucky, on August 21, 1872. In May, 1875, Dr. Joseph N. McCormack moved to Bowling Green, where Arthur received his early education. He next entered Ogden College (Bowling Green) and was graduated with an A. B. Degree in 1892. He then took a year of postgraduate academic work at the University of Virginia, (1892-93). Immediately thereafter he began the study of medicine in his father's office and then went to Columbia University, where he received his M.D. degree in 1896. Returning home, after a year's internship at Paterson General Hospital, Paterson, N. J., he began the practice of medicine and surgery in association with his father. Dr. Arthur soon became interested in public health work and was made health officer of Warren County in 1897 and Assistant Secretary of the Kentucky State Board of Health in 1898. With the passing of years, he devoted more and more time to public health duties and, in 1912, relinquished his surgical work. When his father, who had served as Secretary of the State Board of Health since 1883, retired in 1912, the son succeeded him.

After enactment of the bill in 1918 consolidating the health agencies of the State, Dr. Arthur was appointed State Health Officer, later designated as Commissioner of Health, and continued his duties as Secretary of the Kentucky State Board of Health. From this period on the steady growth of the State Board of Health seemed to move with swifter pace. The small office at Bowling Green had been outgrown, which necessitated removal to the large building at Sixth and Main Streets, Louisville, in 1919. But this building soon became inadequate, and still larger quarters were obtained at 620 South Third Street, which were occupied and dedicated in 1938. Here the foresight of Dr. McCormack became apparent because he had insisted on including an adjoining vacant lot in the deal for the Third Street property. Upon this vacant lot an addition, which doubled the office space of the State Board, was erected in 1942.

Dr. McCormack joined the Kentucky State Medical Association upon his graduation from Medical College and never missed a meeting during 47 years of his membership. In 1907 he was elected Sec-

retary of our Association and became Editor of the Kentucky Medical Journal. The progress of the Association since then discloses his ability. If any article submitted for publication did not measure up to certain standards, or if, for some other reason, its publication was deemed inadvisable, he had a friendly and sympathetic way of refusing publication. He seemed to realize fully that essays were the "children," often born in midnight travail, of the authors and hence beloved regardless of their uncouth nature.

Everything that he did was done conscientiously and to the best of his ability. He had the happy faculty of securing the utmost cooperation and loyalty from his associates. His motto seemed to be "service" and, in serving his brother physician and his brother layman in public health activities, he was serving his Creator. He often referred to himself as a servant, and he did everything in an unselfish spirit. Critics he had, critics often jealous of his power, but these could be brushed aside because he knew his own motives were above reproach.

His illness started in 1934, when he began having attacks of angina pectoris. Electrocardiograms revealed evidence pointing toward relatively advanced coronary sclerosis. He was willing to reduce his smoking markedly, to follow a diet and rest after meals, to take regularly any prescribed medicine without question; but he was unwilling to spare himself in the discharge of his duties. His desire to serve his fellow man took precedence over all else, and this, to me, was a revelation of the power of pure and unselfish love. The anginal syndrome responded nicely to proper medication, and he experienced only occasional attacks until a week before his death. At this time the attacks began to recur with great frequency even when at rest. Absolute rest in bed for at least a month was advised, but he died instantly in an attack at 7:00 p. m. in his apartment at the Brown Hotel, Louisville, on Saturday, August 7, 1943. His will specified that an autopsy be performed, and this disclosed wide-spread coronary sclerosis.

The loss to Kentucky and to the nation sustained by his death is great. Those who assume his duties should try to emulate his example and remember that his motto was service, conscientious service to his fellow men.

Arthur T. McCormack

Journal of Indiana State Medical Association

In the death of Arthur T. McCormack, M. D., of Louisville, organized medicine lost an ardent and indefatigable worker. During most of his professional life he had engaged in medical society activities as well as in matters pertaining to public health. At the time of his death he was serving as secretary of the Kentucky State Medical Society, as editor of its official journal, and as secretary of the Kentucky State Board of Health.

Much of Dr. McCormack's time was occupied in traveling over the country, attending medical meetings and conferences. He was a "front row" man at all such occasions; seldom did one see McCormack sitting in the rear of a meeting room. He was a great "seconder"—he like to second motions—made a lot of them too. His jovial disposition lent much to the meetings he attended.

His best work probably was that in connection with the Kentucky State Board of Health. He took over at a time when health matters in certain mountainous areas of his native state were not of the best, and it was in these sections that he brought about many changes. We liked to quiz him about that phase of his work; just what conditions were, and just how he went about remedying them.

He was a good organizer and, once having effected an organization he knew exactly how to keep it closely knit. This, no doubt, was an inheritance, since his father, Dr. J. N. McCormack, spent most of the latter years of his life in medical organization work. Some three or four decades ago his father was named "an ambassador of good will" by the American Medical Association. His job was to go out in the highways and the byways, especially the latter, there to preach the gospel of medical organization. We recall two such visits to our local society, the first when the membership was about two score. It seemed odd to us that a man would make a special visit to such a small group just to talk about the value of the county medical society, yet that was the work of this good man and he did it well. It was natural, therefore, that his son, Arthur, imbued by the good works of his father, should carry on, although in a somewhat different tempo and amid far different conditions.

We join with our sister State in mourning the passing of one of her most illustrious citizens, and with the Kentucky State Medical Society in the loss of an outstanding member. Thousands of medical men throughout the country will also join with us, for few physicians had a wider acquaintance throughout the nation than Arthur McCormack.

Another name has been added to the long list of notable physicians, men of the "do it" type.

Arthur T. McCormack

Connecticut State Medical Journal

American medicine lost a respected figure and a great citizen when Arthur McCormack of Louisville, Kentucky, died. During the more than seventy years of his active life Dr. McCormack filled many positions of service and trust.

There is a pleasant legend that Dr. McCormack first attended the House of Delegates of the American Medical Association as a small boy with his father, the late Joseph Nathaniel McCormack, who was also the Health Commissioner of Kentucky. Arthur McCormack was a delegate to the American Medical Association for many years and a conspicuous figure in it. Always seated in the front row, he proposed and seconded innumerable motions and was ready to speak with force and clarity on almost any subject, with frequent references to ancient history and the classics. He was a friendly man, a great exponent of the sovereign State of Kentucky where the State Medical Association and the State Department of Health are one, and all reposed on Dr. McCormack's capacious desk. His many friends and few critics will miss him, for he was a colorful, vigorous personality not easily forgotten.

Arthur Thomas McCormack, M. D.

The West Virginia Medical Journal

Dr. McCormack had the unusual distinction of having been licensed by his own father to practice medicine, a privilege which has been very rare in the annals of American medicine. He was for many years editor of the Kentucky Medical Journal and for many years represented Kentucky in the House of Delegates of the American Medical Association. By virtue of his personality and his years of service, he was one of the most influential members of that body, having served often as Chairman of the Reference Committee on Hygiene and Public Health and several times as Chairman of the Committee on Reapportionment.

Dr. McCormack was a democrat, but was retained in office by republican Governors as well as by those of his own party. He was a Presbyterian and a Mason. A fluent and convincing speaker, he was active in all medical organizational work, and was an especially ardent worker in the Southern Medical Association, being a member of its board of Trustees at the time of his death. Three loyalties guided Dr. McCormack's life; to Kentucky, to the medical profession, and to his friends. Of a jovial disposition and a brilliant conversationalist, his friends were legion and he was familiarly addressed by his professional confreres, throughout the United States as "Arthur". Kentucky has lost a brilliant son, and the medical profession an outstanding member. Peace to his ashes.

McCormack, The Man

JOHN W. KELLY

In Monthly Bulletin of Kentucky State Department of Health

It is not the purpose of this article to attempt to evaluate the achievements of Dr. Arthur Thomas McCormack in either public health or medical organization. His accomplishments in these two fields are so indissolubly linked with those of his father, Dr. Joseph Nathaniel McCormack, that the contributions of the son assume their real proportions only when taken in connection with those of the father. Both are matters of record and both are attested by concrete evidence everywhere in Kentucky, in most of the other States in the Union and far beyond the national borders. Together, they constitute an epic in the annals of public health and of medicine.

Those closely associated with him in his chosen specialty of public health were fully appreciative of McCormack, the physician, and of McCormack, the public health administrator, but, it was McCormack, the man, whom we knew the best and loved the most. Kindly, sympathetic, considerate, loyal to a degree and generous to a fault where our errors, whether of omission or of commission, were concerned, he was regarded rather as the father of a big family than as the execu-

tive head of a great organization. It was these personal traits which particularly endeared him to all of his associates, and engendered in those under him a feeling of loyalty, so general as to be, probably without parallel in any organization of similar size anywhere in this country. And it was these same traits which made his passing a personal loss, not only to heads of divisions and bureaus, but to every employee of the State Health Department, from highest to lowest, and to very member of the personnel of the State's 103 county health departments, from health officer to filing clerk.

In Arthur McCormack were combined a fine mind, excellently trained; educational attainments of a high order, vision of exceptional breadth, dynamic energy and a philosophy of life which disregarded self. His outlook was always toward the future; his prospective was always long ranged. No policies or procedures were inaugurated until he had first carefully and thoroughly thought out their effects in the years to come, and his ability to foresee what these effects would be was truly remarkable. It was these qualities and qualifications, coupled with a magnetic personality, an amiable disposition, courage of convictions, and confidence in his fellowman, which made him such an outstanding success in his chosen field. They would have made him an equal success in any field he had decided to enter.

If one characteristic more than another distinguished Arthur McCormack, as it did his father, it was the desire to render service to his fellow-man. He loved "human folks" and always enjoyed helping them in any way within his power. And what he himself practiced was constantly urged upon his associates. Scarcely ever did a staff meeting pass that he did not take occasion to emphasize the paramount importance of service. "Who renders the service," he said, "is not important. It is the service itself that really counts."

Nor were his services confined to promotion of public health and the advancement of the medical profession, which, in Kentucky, is charged by statute with protection of the health of the people. They extended to and included anything and everything affecting human welfare. His quiet, persistent and unpublicized efforts, outside the fields of public health and medical organization, in restraining the enactment of legislation which he considered injurious to the public welfare were probably productive of as valuable results as were his efforts openly and actively exerted in behalf of every measure generally recognized to be in the public interest.

An equally outstanding characteristic of Arthur McCormack was friendliness. In him was illustrated, to an exceptional degree, the *suaviter in modo, fortiter in re* of Quintilian. His was the rare ability to make friends and to keep them. His was the even rarer ability to say "no" without giving offense. Few men in the State ever had more friends, and no man more richly deserved them. Few men in the State ever helped, in one way or another, more people, and certainly no man ever derived more pleasure from extending that help. Few men in the State were more charitable toward those who disagreed with him. Again, he possessed the happy faculty of inspiring people to love him and of making it easy for them to show their affection. To these qualities he owed no small measure of his success in advancing the cause of public health and organized medicine in Kentucky.

The National Defense Program and the subsequent War Emergency placed on Dr. McCormack steadily increasing responsibilities which finally taxed his strength beyond the point of endurance. Yet, he attempted neither to evade nor to shirk, but continued to discharge them, cheerfully and uncomplainingly, to the very end. In the last analysis, he was as much a war casualty as if he had lost his life on the battle front.

As a physician, Dr. McCormack exemplified, in highest degree, the traditional spirit of medicine; as a specialist in public health, he combined vision of rare keenness and clarity with the practical ability to translate vision into reality; as a man, he was a gentleman in the truest sense of the term—one who loved and delighted to serve his fellow-man.

To his memory we offer a salute in the names, severally and jointly, of a great trinity—in the name of Ireland, which endowed his forebears with a strength of character, an alertness of mind, a tenacity of purpose, and a loyalty to conviction which they passed on to him as a priceless heritage; in the name of Kentucky, whose soil gave him birth, whose traditions nurtured and cultured him, and whose people he served so long, so faithfully and so well; and in the name of Virginia, a strain of whose blood, on the distaff side, furnished the leaven which properly leavened the whole.

The End of a Long and Unique Regime

Louisville Courier Journal

The death of Dr. Arthur Thomas McCormack, Kentucky's state health commissioner, ends not only a career of national prominence but a regime unique both in its length and accomplishments. For 64 years from its creation, under two constitutions and sixteen successive administrations, Drs. J. N. and Arthur T. McCormack, father and son, personally managed and controlled the state health department.

Although the late commissioner did not shine altogether in the reflected glory of the elder, the uninterrupted continuity of policy when and since he assumed the executive functions in 1912 makes it impossible to consider his administration separately. Nor would he have had it so. He revered his father. There was a touch almost feminine in the tender devotion between these two utterly masculine characters. Many recall seeing the tall, bulky form of the son bend slightly with unaffected simplicity to receive the customary paternal kiss when they met after being 24 hours apart.

Filial devotion included adherence to the elder McCormack's aims and policies in which the commissioner was brought up; and, in evaluating their work, it is to be remembered that their metier was public health field service, not institutional care. In that sphere, the son's achievement has been to correlate in an omnibus department every related agency and expand and develop a rudimentary organization which originated in a plague of cholera and yellow jack under peculiarly auspicious circumstances. Governor Luke P. Blackburn had successfully fought the plague at New Orleans, Natchez, New York City and finally Versailles, Ky., where an adoring constituency sent the county doctor to the legislature. Governor Blackburn placed Dr. J. N. McCormack, who shared his vision and aggressive enthusiasm, on the new board of health and appointed him secretary. The rest is as much the biography of two men as history.

It is, to be sure, part of the political history of the last 64 years, but a selfless sort of politics the like of which Kentucky has never seen except in the case of another Bowling Green personality with a single-tract mentality, the late Dr. H. H. Cherry who founded the institution of learning on College Heights. More than medical skill was necessary to establish professional standards, add or annex all the multitudinous divisions from vital statistics to sanitation and local health units, prevent dispersion or seizure by covetous hands. Of all the state departments, that of health alone escaped ripper legislation but repulsed it more times than any other has been threatened.

The impregnable stronghold of the health department is the autonomous Kentucky State Medical Association. All the astuteness of Dr. J. N. McCormack in securing and advancing the cause to which he gave heart and mind is summed up in one exploit. He converted an elite society of exclusive membership into an organization of licensed practitioners. Thereafter politicians had the country doctors to reckon with and they stood by the McCormacks without once faltering.

Father and son were distinguished by their amicable professional relationships at home and the standing of the department in the nation. Now that hereditary leadership has come to a natural end, primary responsibility for the conduct of this immense and far-reaching service devolves for the first time directly upon the medical and allied professional associations which nominate members of the State Board of Health.

Dr. Arthur T. McCormack

Flemingsburg Times-Democrat, Flemingsburg, Kentucky

Dr. A. T. McCormack, State Health Commissioner, passed away at his suite in the Brown Hotel last Saturday at 7:00 P. M. With his departure the chapter of one of Kentucky's most illustrious families closes.

As a man he was, both figuratively and mentally, head and shoulders above the great common herd. He was a fearless leader and his work in public health was not only outstanding in Kentucky but was also recognized in every state in the Union.

His genial smile and charming personality won for him the confidence of all his fellow workers. He was the overflowing fountain for which they drew inspiration and determination to accomplish things in life really worth while.

Dr. Arthur T. McCormack

Bulletin, Kentucky Congress of Parents and Teachers

Dr. A. T. McCormack has just passed on. He and his father, the late Dr. J. N. McCormack, have left as a monument to their dreams and ambitions the greatest, most active Health Department in our Nation, and one that is favorably known internationally. May every Parent-Teacher unit commemorate with a moment of prayer the life of the greatest warrior that Public Health has ever known.

Arthur Thomas McCormack, M. D.

MRS. MARY BRECKINRIDGE

In Quarterly Bulletin
The Frontier Nursing Service

When Dr. McCormack gave "the Department of Health back to the Commonwealth of Kentucky," he was indeed relinquishing a stewardship held until then only by his father and himself and returned it to the Commonwealth enhanced a thousandfold. Although Dr. McCormack was a great man, it is as a great friend that We shall always remember him. What the Frontier Nursing Service owed in its early days to his understanding guidance can never be put into words. Not long before his death, I lunched with him in Louisville to get his help in the medical crisis that had come upon us and he gave me two hours of his time and every facility at his command. He himself lived in the spirit of these words of his, "Who renders the service is not important. It is the service itself that really counts." With him, to live was to serve, but in the vaster reaches of his mind there was scope for an ever widening field of service in which I am sure he is active now. Those who were most dear to him and closest to him can realize the meaning felt by the unknown author of these lines:

Lord, I believe!
Man is no little thing,
That, like a bird in Spring
Comes fluttering to the Light of Life,
And out into the darkness of long death.
The Breath of God is in him,
And his agelong strife
With evil has a meaning and an end.

RESOLUTIONS

ASSOCIATION OF STATE AND TERRITORIAL HEALTH OFFICERS

WHEREAS, the Almighty has called from our ranks a kind, sympathetic, considerate, and loyal friend and co-worker, and

WHEREAS, those of us who were closely associated with him in public health appreciated him as a great public health statesman and administrator—it was necessary to know him as a man to fully appreciate his fine qualities of mind and soul—and

WHEREAS, often we have heard him say "who renders the service is not important; it is the service itself that really counts," and

WHEREAS, he loved people and delighted to serve them, and was interested in all things affecting human health and welfare (It will be a long time before, if ever, we see his like again), and

WHEREAS, he always commanded a respectful hearing and never met opposition of whom he was afraid,

THEREFORE, BE IT RESOLVED, that in the death of Doctor Arthur Thomas McCormack the Association of State and Territorial Health Officers has lost a friend and beloved comrade who exemplified, in the highest degree, the spirit of all that is best in medicine and public health,

RESOLVED FURTHER, that we shall sadly miss his rare clarity of vision, intelligent, constant interest and exceptional energy and devotion to our cause, so badly needed at this critical hour in public health history in our own country and the world.

NATIONAL MALARIA SOCIETY

WHEREAS, Dr. Arthur T. McCormack, a beloved member of the National Malaria Society, having achieved works of outstanding merit, has been taken from us by death, and

WHEREAS, the Public Health profession has been uplifted by his faithful service and the whole country has been enriched by the ample fruits of his zeal, proficiency and wisdom, and

WHEREAS, his professional associates mourn his loss and, in so doing, keenly realize that his family has sustained a still greater loss,

THEREFORE BE IT RESOLVED: That we bow to the Divine Will, with a spirit of thankfulness for the inspiration and enthusiasm gained by long association with our late departed friend.

That we express our deep appreciation of his professional integrity, his loyalty to friends, his upright and noble ideals, and his earnest efforts on behalf of the National Malaria Society.

NATIONAL TUBERCULOSIS ASSOCIATION

The Executive Committee of the National Tuberculosis Association has noted with sorrow the passing of Dr. Arthur T. McCormack, State Health Commissioner of Kentucky since 1913.

Dr. McCormack had a national reputation in the field of public health. As early as October, 1918, he had created a Bureau of Tuberculosis in the State Health Department, following the pioneer work carried on in Kentucky by the Kentucky State Tuberculosis Commission.

In 1919, when the Kentucky Tuberculosis Association was organized, Dr. McCormack gave a great deal of time and thought to the organization of a volunteer program to render assistance in the control of tuberculosis throughout the State.

He became a director of the National Tuberculosis Association in 1921, serving two two-year terms, and from 1921 to the time of his death he had served continuously as the representative director from Kentucky.

NOW, THEREFORE, BE IT RESOLVED, that the Executive Committee record this expression of its sorrow in the minutes of the meeting and request the Executive Office to send copies of this resolution to the Kentucky Tuberculosis Association, to the Kentucky Department of Health, and to Dr. McCormack's family.

JEFFERSON POST NO. 15 AMERICAN LEGION

WHEREAS, the Almighty Father, in His infinite wisdom has seen fit to remove from our ranks Dr. Arthur T. McCormack, a beloved comrade, and

WHEREAS, in so doing, has removed from among us one who was loved by all who knew him, was faithful to his family and

unceasing in his work for the tenets of Americanism, and

WHEREAS, devoting himself to the welfare of our Community, our State and our Nation, without stint or limit, his work and spirit will long be remembered,

NOW, THEREFORE, BE IT RESOLVED, that Jefferson Post No. 15, American Legion, mourns his loss and hereby expresses to Dr. Arthur's family its deepest sympathy in the passing of their beloved one, and

BE IT FURTHER RESOLVED, that a copy of this resolution be furnished the family and the resolution be spread upon the minutes of the Post and a page set apart therefor.

COMMITTEE:

T. R. Gunter
M. B. O'Sullivan

STATE BOARD OF HEALTH OF KENTUCKY

WHEREAS, Divine Providence, in its infinite wisdom, has seen fit to remove from our midst and from the leadership of public health in Kentucky our own beloved "Dr. Arthur" McCormack, and

WHEREAS, he officiated as Secretary of the State Board of Health and, by virtue of that office, successively as State Health Officer and State Health Commissioner for 31 years, and

WHEREAS, his vision, energy, farsighted planning and wise guidance of his associates were instrumental in giving to Kentucky a public health service which not only attracted national attention, but served as a model for other States, and

WHEREAS, the State Board of Health (the legal agency for public health in Kentucky) desires to bear testimony on behalf of its full membership, individually and collectively, to its admiration for the man and for the deeds which he wrought,

NOW, THEREFORE, BE IT RESOLVED: That we express our deep gratitude to the Giver of All Good Things for the inestimable services which Dr. McCormack rendered to the people of Kentucky during his life and for memories which cannot fail to stimulate us to greater efforts to bring reality to more and more of the visions and dreams of this great man for the promotion of public health and the advancement of medical science,

That we extend our sincerest condolences to the State Administration, the Medical Profession of Kentucky, the Staff of the State Department of Health, the staffs of all the local Health Departments, to whom we confidently turn, in our bereavement, for continued encouragement and support, to the end that those trained by him may carry on, with increasingly productive results, in promotion of the health, happiness and welfare of the people of our beloved Commonwealth. The father lighted the torch of public health in Kentucky and held it aloft until, from failing hands, it was passed to the son; the son carried it with steadily increasing brilliance for more than three decades; it is ours to see to it that it is raised higher and higher, until its health giving rays shall have penetrated to every nook and cranny of Kentucky.

That we extend to the surviving members of the family our deepest sympathy in their bereavement, and that a copy of these resolutions be spread upon the minutes and made an integral part of the official records of the Board.

COMMITTEE ON RESOLUTIONS:

George S. Coon, M. D.
Carl J. Johnson, D. O.
P. E. Blackerby, M. D.

ADMINISTRATIVE STAFF, STATE DEPARTMENT OF HEALTH

WHEREAS, the Great Physician has taken from his labor of love Dr. Arthur T. McCormack, the pilot of public health work in Kentucky, and

WHEREAS, Kentucky has lost a great citizen and the Staff of the State Department of Health has lost a wise counsellor and loyal friend, and

WHEREAS, we mourn the termination of a career so filled with useful service to humanity,

NOW, THEREFORE, BE IT RESOLVED, that we extend to his family our deepest sympathy and commend his life, as well worthy of emulation, not only to members of the staff of the Department of Health and the medical profession, but also to the citizenship of Kentucky to whom he upheld the noblest ideals.

That we, as members of the organization which his father founded and which he so developed as to make a comprehensive system of public health available to every citizen of the Commonwealth, hereby pledge our loyalty and unstinted efforts to maintain and make effective the

high standard of service that has been bequeathed to us.

That the State Board of Health be requested to enter this resolution in its minutes and copies be sent to the members of his family.

COMMITTEE:

L. H. South, M. D., Chairman,
J. F. Blackerby
Mayme Sullivan
Sarah Dugan

ANNUAL SCHOOL FOR CITY AND COUNTY HEALTH OFFICERS

"There are stars that go out into the darkness,
But whose silvery light shines on;
There are roses whose perfume still lingers,
When the blossoms are faded and gone;
There are hearts full of light and sweetness,
When the life current no longer flows,
Still their goodness lives on with the living,
Like the souls of the star and the rose."

WHEREAS, the Great Physician has summoned to his side our beloved chief, and

WHEREAS, his work of ministering to the sick and afflicted, of protecting the health and promoting the happiness of the people of Kentucky and of inspiring others to carry on has ended, and

WHEREAS, his dynamic personality, extraordinary abilities and his almost prophetic foresight as a leader were devoted, throughout his entire life, to the betterment of his fellowman, whom he loved with an abiding love,

NOW, THEREFORE, BE IT RESOLVED that the School for City and County Health Officers, in annual session assembled, tender this resolution of respect to the family of our great leader, and that a copy be sent to his family and printed in the Kentucky Medical Journal.

COMMITTEE:

P. C. Sanders, M. D., Chairman
J. Leland Tanner, M. D.
Robert H. English, M. D.
Owen Carroll, M. D.

BULLITT COUNTY BOARD OF HEALTH

WHEREAS, Dr. Arthur T. McCormack passed from this life August 7, 1943, and

WHEREAS, he was endowed with the quality of kindness, an amiable disposition, and a personality which endeared him to all with whom he came in contact, and

WHEREAS, possessed of a fine mind, excellently trained, and a broad vision, he, through many years of service as State Health Commissioner and Secretary of the State Board of Health of Kentucky, rendered exceptionally meritorious service to the people of Kentucky and of the nation, through the promotion of public health and the advancement of medicine generally,

NOW, THEREFORE, BE IT RESOLVED by the Board of Health of Bullitt County, that we greatly mourn his loss and extend our sincere sympathy to his family in their sorrow, and

BE IT FURTHER RESOLVED that a copy of these resolutions be spread upon the minutes of this Board and copies sent to his family, and to the State Board of Health of Kentucky.

BY:

Lindsay Ridgway
Paul F. Orr, M. D., Secretary

FAYETTE COUNTY MEDICAL SOCIETY

It is with sorrow that the Fayette County Medical Society notes the death of Dr. Arthur T. McCormack which occurred in Louisville on August seventh.

For three decades and more Dr. McCormack had been Secretary of the Kentucky State Medical Association and Chief Health Officer of Kentucky. So ably had he performed the duties of these offices that at the time of his death he was the greatest figure in the State in this work, and among the greatest in the United States.

Of brilliant intellect, broad sympathy, and great energy, he strongly attached to himself innumerable friends. His death long will be felt not only by these, but also in the medical councils of this State and of the Nation.

The Society orders that this expression of the esteem in which it held Dr. McCormack be made a part of the minutes and that a copy be sent to his family.

COMMITTEE:

John W. Scott, M. D.
Charles A. Vance, M. D.
Ernest B. Bradley, M. D.

JEFFERSON COUNTY MEDICAL SOCIETY

WHEREAS, Almighty Providence has decreed that Dr. Arthur Thomas McCormack's services to his fellowman should end, and

WHEREAS, Dr. McCormack was a member of this Society and had officially served the profession of Kentucky all of his professional life, and

WHEREAS, any and all members of the profession were free to call upon him for advice and assistance, and

WHEREAS, he contributed largely to keeping the standard of Kentucky medicine the recognized equal of any in the country, and

WHEREAS, few physicians have ever rendered to their profession greater service than he, and

WHEREAS, this Society desires to utter resolutions for its own memorabilia,

NOW, THEREFORE, BE IT RESOLVED that we extend deepest sympathy to the bereaved family, and that a copy of these resolutions be spread upon the minutes of this Society, and that copies be sent to Dr. McCormack's family and to the State Medical Journal.

Oh! day of triumph, when the Master says
"Well done! Enter thou into eternal rest."
So, too, when fellowmen, in loving way,
Display esteem that stands the crucial test,
And crowns a fellow member with a life—
Long honor that befits him best to serve
The Master and mankind, in daily strife
That never from the paths of duty swerve;
Ah! then most truly has his worth been won
By patience and a smile, that ne'er did harm
The right, nor ever left the wrong undone
And gave our brother his great charm:
Thus he did bless his generation served
Thus good and future Medicine preserved.

COMMITTEE:

R. Alexander Bate, M. D., Chairman
R. I. Kerr, M. D.
L. Lyne Smith, M. D.

MUHLENBERG COUNTY BOARD OF HEALTH

WHEREAS, Dr. Arthur McCormack passed away at seven o'clock on Saturday evening. August 7, 1943, and

WHEREAS, he had devoted his life and his talents to the advancement of Public Health in Kentucky, and

WHEREAS, a substantial degree of the high standard and attainment of Public Health in Kentucky is a direct result of his genius and vision,

NOW, THEREFORE, BE IT RESOLVED by the Muhlenberg County Board of Health, that we hereby express our deep regret at his passing, and our sincere sympathy to those of his family who survive him.

Realizing further that Public Health in Kentucky has sustained a serious loss, and that added responsibilities will, therefore, fall upon those who are to carry on,

BE IT FURTHER RESOLVED that we express our desire to support, in every way, the program of the Kentucky State Department of Health.

BY:

Agnes Lyon Brown, M. D.,
County Health Officer
J. E. Wood, Chairman,
Muhlenberg County Board of Health

NELSON COUNTY BOARD OF HEALTH

WHEREAS, Dr. Arthur T. McCormack, State Health Commissioner and Secretary of the State Board of Health, died on the 7th day of August, 1943, and

WHEREAS, Dr. McCormack had been State Health Commissioner for many years, and

WHEREAS, his accomplishments in the public health field were outstanding, and

WHEREAS, he had given to Kentucky, in the administration of its health laws, such outstanding and meritorious services that his abilities were recognized not only by the whole nation, but also internationally, and

WHEREAS, he possessed exceptional ability and great courtesy,

NOW, THEREFORE, BE IT RESOLVED by the Board of Health of Nelson County, that we greatly deplore the passing of Dr. Arthur T. McCormack and extend our sympathy to his family in their bereavement, and

BE IT FURTHER RESOLVED, that a copy of these resolutions be spread upon the minutes of the Board of Health of Nelson County, and copies sent to his family and to the State Board of Health of Kentucky.

BY:
Wallace Brown, Chairman
Paul F. Orr, M. D., Secretary

PERRY COUNTY MEDICAL SOCIETY

WHEREAS, members of the Perry County Medical Society, and the medical profession in general, have learned, with deep regret, of the death of Dr. Arthur T. McCormack, State Health Commissioner and Secretary of the State Board of Health, and

WHEREAS, Dr. McCormack had been a frequent visitor at the meetings of our society, had lent his aid in the solution of our problems and had been a constructive counsellor and an honor to the profession, and

WHEREAS, his battles for public health, and for high ethical standards among the profession are recognized in all sections of the Commonwealth, and

WHEREAS, his efforts have left their mark on the general progress of our State,

NOW, THEREFORE, BE IT RESOLVED by the Perry County Medical Society, in regular meeting assembled, that, in the death of Dr. McCormack, the medical profession has lost one of its ablest members, the State an honest and efficient public servant, and the Perry County Medical Society a sincere friend.

BE IT FURTHER RESOLVED that we deeply sympathize with his grief-stricken family, and that a copy of these resolutions be furnished the press, be spread upon the minutes of this organization, and a copy furnished the family.

COMMITTEE:
J. P. Boggs, M. D.
S. B. Snyder, M. D.
H. W. Gingles, M. D.

SCOTT COUNTY BOARD OF HEALTH

WHEREAS, Dr. Arthur Thomas McCormack, Health Commissioner and Secretary of the Kentucky State Board of Health, died on the 7th day of August, 1943, and

WHEREAS, Dr. McCormack had served Kentucky in this field since 1912, and was internationally known for his public health work, and

WHEREAS, the people of Kentucky, particularly those connected with the Kentucky State Board of Health, were shocked and inexpressibly saddened to hear of the death of Dr. McCormack, and

WHEREAS, his passing has deprived our State of one of its best known, best loved and most influential citizens,

NOW, THEREFORE, BE IT RESOLVED, that the Scott County Board of Health pay tribute to the memory of Dr. Arthur Thomas McCormack by expressing its regret at the loss to the profession of which he was so noble an exponent.

BE IT FURTHER RESOLVED, that a copy of this resolution be spread upon the minutes of the Scott County Board of Health, and that a copy be sent to the Kentucky State Board of Health, and a copy be sent to the family of Dr. McCormack.

H. V. Johnson, M. D., President
W. S. Allphin, M. D.
J. A. Campbell, M. D.
M. D. Sanford, M. D.
Judge G. G. Barkley
Mrs. Carl Price

SPENCER COUNTY BOARD OF HEALTH

WHEREAS, it has come to the attention of the Spencer County Board of Health that Dr. Arthur T. McCormack, State Health Commissioner and Secretary of the State Board of Health has been called to the Great Beyond, and

WHEREAS, we recognize the untiring efforts of this great man in the field of preventive medicine have been of immeasurable value in promoting the health and happiness of Kentuckians now living and of generations yet unborn,

NOW, THEREFORE, BE IT RESOLVED, that the Spencer County Board of Health extend to his family a deep appreciation of his great work in this country, and our heartfelt sympathy in their loss.

BE IT FURTHER RESOLVED, that a copy of these minutes be spread upon our records, a copy be sent to his family and a copy be sent to the State Board of Health of Kentucky.

BY: Paul F. Orr, M. D.

WARREN COUNTY MEDICAL SOCIETY

WHEREAS, God, in His infinite wisdom, has seen fit to call to Himself His faithful servant, Dr. Arthur Thomas McCormack, and

WHEREAS, Dr. McCormack was by inheritance, by training and by practice a born Public Health Officer, and

WHEREAS, he had received at the hands of his fellow practitioners all the honors which the profession, local, State and national, could bestow, and

WHEREAS, his professional life had reached its fullest development,

NOW, THEREFORE, BE IT RESOLVED that, in the passing of Dr. McCormack, the local profession has lost a most faithful friend, the profession of the State has lost a servant whose record speaks for itself, and the nation has lost a man whose life was devoted to the health and welfare of his fellow-man.

COMMITTEE:
Jno. H. Blackburn, M. D., Chairman
E. W. Stone, M. D.
F. D. Reardon, M. D.

QUEEN ESTHER CHAPTER NO. I, O.E.S.

WHEREAS, the Angel of Death has again visited our Chapter and called to his eternal rest Brother A. T. McCormack, and

WHEREAS, Brother McCormack joined our Chapter on July 27, 1934, and was also a member of Bowling Green Lodge No. 73, A. F. and A. M.,

NOW, THEREFORE, BE IT RESOLVED that, in the death of this brother, we have lost a faithful member and the people of Kentucky a useful and brilliant physician.

BE IT FURTHER RESOLVED that we extend our deepest sympathy to his family, and that a copy of these resolutions be placed upon our records, and a copy be sent to Dr. McCormack's family.

"Farewell, dear Voyager, the river winds and turns,
The cadence of your song wafts near to me;
And now you know the thing that all must learn—
There is no death—there's immortality."

Katherine Hoagland, Chairman,
Emma Weber
Henry Aicken

:-: LETTERS AND TELEGRAMS :-:

The nation loses a great public health statesman; myself an intimate friend for more than thirty years.

John A. Ferrell, M. D.,
Medical Director,
International Health Division,
Rockefeller Foundation

Dr. McCormack's friendship for the Children's Bureau was one of our great strengths and his loss is irremediable.

Katherine S. Lenroot, Chief,
Children's Bureau,
Washington, D. C.

As President of the Southern Medical Association, I know of no greater loss to our Association and to the thousands of his professional and other friends.

Harvey F. Garrison, M. D., President,
Southern Medical Association

The nation and a legion of friends mourn a great leader in American medicine and public health.

Walter L. Bierring, M. D.,
State Health Officer of Iowa and
Secretary, State Licensing Boards

The State and the nation have lost one of their finest citizens. There was only one Arthur McCormack, and there is no one that can take his place.

T. F. Abercrombie, M. D.,
State Health Officer of Georgia

His passing will be a great loss to public health, and especially to the Association of State Health Officers, since for so many years he has been the only effective educator of Congress in the whole broad field. Others have presented more or less effectively their needs for this or that activity but Arthur was the one who showed them the need for overall planning and presented the state administrative point of view in an effective manner. He was also doing his share in bringing organized medicine to a better understanding of its responsibility in public health, just as his father had been doing before him. Above all this, I feel that I have lost one of my closest personal friends, one whose company I have always enjoyed, and one whom I shall always miss.

Edward S. Godfrey, Jr., M. D.,
State Health Commissioner,
New York

In the death of Dr. Arthur McCormack, public health sustains an inestimable loss.

A. F. Austin, M. D.,
Health Officer, Alabama

Because of his great record of achievement in the field of medicine and public health and especially because of his leadership in our national organization, the entire nation has suffered an irreparable loss in his passing.

William M. McKay, M. D.,
State Health Commissioner, Utah

I was acquainted with Dr. McCormack over a long period of years. I know how great were his accomplishments and what a significant position he occupied in the field of public health in this country. He will be mourned by all those who had the privilege of knowing him either as a friend or as an outstanding figure in his field.

J. Lynn Maheffey, M. D.,
Director of Health, New Jersey

The death of Arthur McCormack is a great loss to the public health program, not only in his own State, but in the United States. Doctor McCormack was a man of rare vision, unusual capabilities, a man who knew men, could meet men on any footing, and carry the message of public health to all types of people. The Conference of State and Provincial Health Officers especially has lost one of its most valuable members, constructive, genial and forward looking. He had the happy faculty of an unusual command of the English language. His talks were inspir-

ing not only as to the health objectives contained therein, but in the masterly manner in which he was able to present his analysis of the problems confronting the Conference and the effect of the Conference proceedings upon the welfare of the citizenship of the United States. The services rendered by Doctor McCormack in keeping a large number of the members of the Congress of the United States informed upon the health and welfare program cannot be measured, such services being constructive, broad and convincing. It will be most difficult indeed to find a man who can replace him in any and all of these fields. He was a rare gentleman of fine personality, serious yet humorous in his delineation of the various subject matters brought up for deliberation.

C. A. Harper, M. D.,
State Health Commissioner Emeritus,
Wisconsin

Dr. McCormack was of invaluable service to health departments, other than Kentucky's, and his going is an irreparable loss to all of us. We shall miss him in many ways, but we are grateful for the many years of service he was able to render.

R. H. Hutcheson, M. D.,
State Health Commissioner, Tennessee

The State and Territorial Health Officers have lost a great friend and a man who cannot be easily replaced in the field of public health. He not only served his own State well, but he rendered a great service to all the health departments in this country, through his successful contacts with prominent people outside of the profession.

J. E. Offner, M. D.,
State Health Commissioner,
West Virginia

He was a grand gentleman and irreplaceable public servant—admired by all, and a great influence in the lives of many of us so new in the public health field.

W. Carter Williams, M. D.,
Former State Health Commissioner,
Tennessee

We have lost one of our group of State Health Officers who will always be missed. Indeed, his presence will always seem to hover over the front row. He helped us all and I always knew I could get helpful aid from him.

Stanley H. Osborn, M. D.,
State Health Commissioner,
Connecticut

It was my privilege to know Dr. McCormack and work with him in the public health field for many years. We shall miss his genial personality and his counsel in dealing with problems in a practical and effective manner.

George C. Ruhland, M. D.,
Health Officer,
District of Columbia

Dr. McCormack made a splendid contribution to the health service of Kentucky and deserves to be remembered as one of Kentucky's most distinguished citizens. I am quite certain people of this State will never forget the contribution he and his distinguished father made to public health.

H. L. Donovan, President,
University of Kentucky

His passing is a great loss to the State, as well as to the local community.

Wilson W. Wyatt,
Mayor of Louisville

Despite the loss, I have the memory of a great friendship with a great man. He was distinguished as a public health man, but he was most distinguished as a man who loved his fellowman and was always thinking of ways to serve him.

Albert McCown, M. D.,
Director, Medical and Health Service,
American Red Cross

He was a friend of many years and I will miss seeing him at the various meetings where we have worked together. He was a successful influence in the development of public health as well as medicine in general.

Ray Lyman Wilbur, M. D.,
Chancellor, Stanford University,
California

"Doctor Arthur," as we all fondly called him, has built a monument for himself in the State of Kentucky and the nation at large through his accomplishments in the work which was his life—the betterment of the well-being of his fellow citizens. The imprint of his dynamic personality, his unswerving and unselfish devotion to Public Health and his loyalty to the people who were his associates remains with each of us who was privileged to work closely with him, and serves as an influence in our personal effort to push toward the high goals he had set for himself in his field of endeavor.

F. V. Meriwether, M. D.,
District Director,
U. S. Public Health Service

We have lost a long and well-tried friend. Of all the workers in public health, I believe Dr. McCormack was the one who stood by the Children's Bureau most consistently through thick and thin, in its trials and satisfactions. In my early days with the Bureau I remember so well Grace Abbott's regard and friendship for Dr. McCormack, and her deep gratitude to him for his loyalty in many a tough spot. His willingness to work with women and his understanding of what some of us have tried to do, even when he did not agree, was characteristic of him. If anyone ever "died in harness," Dr. McCormack did. I shall never cease to be grateful for his help and advice and friendship. The Children's Bureau has lost a real friend, too. There is no one who can replace him.

What he has meant to the Bureau can be multiplied many times when one considers his influence in Kentucky and in the nation for the improvement of public health. His loss is nationwide.

Martha M. Eliot, M. D.,
Asst. Chief, Children's Bureau,
Washington, D. C.

Kentucky has lost a great citizen and the medical profession its greatest leader. All doctors mourn in reverence.

D. M. Griffith, M. D., Past President
Kentucky State Medical Association

Dr. McCormack was a great force in the general health movement, a true friend of the U. S. Public Health Service, and a wise counselor of the oncoming generation. His loss will be felt for a long time.

Joseph W. Mountain, M. D.,
Asst. Surgeon General,
U. S. Public Health Service

The city, the State and the nation have lost a most useful and patriotic citizen. The medical profession has lost a great physician, and his place cannot be filled. Personally, I have lost a true friend.

Chauncey W. Dowden, M. D.,
Louisville

His contribution to the war effort was outstanding and we shall always be grateful for his assistance to Selective Service from its very beginning. Truly a giant has fallen and the State and nation he has served so well will miss him more and more as the days go by.

Frank D. Rash,
State Director of Selective Service in Kentucky

Through years of association with Dr. McCormack in the House of Delegates of the A. M. A., as well as in the Annual Conferences of Secretaries and Editors, I had gotten to know him well. As I stood on the platform at the meeting of the Conference of Secretaries and Editors in Chicago last February, I could see the shadow of this big man sitting down in the front row, as he always did, usually just to the right of the platform as one faces the audience. Arthur McCormack was always prompt and faithful in his attendance. He was always ready and helpful in his big, kindly, gentle way, in making a motion that clarified a troublesome situation. As a seconder of motions, he was unsurpassed. At all times he was wisely tolerant and yet very definite and constructive in his contributions to organized medicine. Now Arthur McCormack has become one of the great legendary figures of yesterday.

Roger I. Lee, M. D.,
President-Elect, American Medical Association

Dr. McCormack's whole life was given to the upbuilding of his profession and the promotion of the public good. He had before him the living example of his father's pioneer work in Public Health and, in every way possible, he carried out the precepts and example of that worthy sire's life. The life of "Dr. Arthur," as he was so affectionately known by all of us, was the fulfillment of a life devoted to humanity and the public.

John H. Blackburn, M. D.,
Member, State Board of Health

He will be missed by a multitude of people, professional and lay, who admired him for his achievements and loved him for his geniality.

Michael M. Davis,
Chairman, Committee on Research in Medical Economics,
New York City

He was a great leader in the field of public health, an outstanding doctor, a rare gentleman, and my valued friend. Measured by the good he did and the friends he had, his life was a conspicuous success.

Thomas M. Duhigg,
Comdr. (MC) USN (RET.)

American Medicine, Kentucky medicine in particular, has lost a great leader.

H. G. Reynolds, M. D., Past-President,
Kentucky State Medical Association

What a wonderful man he was! He was a rare combination of a great mind, a ready tongue and a generous heart. His life certainly was a full one and he had many experiences which were priceless.

William F. Braach, M. D.,
Mayo Clinic,
Rochester, Minn.

His work and that of his distinguished father will ever remain as an important milestone in the annals of public health and medicine.

Henry Vaughan, Dr. P. H.,
Dean, School of Public Health,
University of Michigan

He stood for all that was good and fine, and that is the type of man needed most in these trying times. His is the kind of loss that cannot be replaced. We certainly will miss his genial spirit and sage advice.

Vincent W. Archer, M. D.,
Department of Roentgenology,
University of Virginia

I first knew Dr. McCormack in the relationship of patient and doctor. I was a student in Bowling Green. He was my physician. As a result of his devotion to me then, I developed an affection for him which has lasted all the way to the end. Since becoming a doctor, I have observed his career, both as a man and as a doctor. To me his greatest accomplishments are in the field of medical statesmanship. He possessed an unusual aptitude for work in this field. He had a keen insight into problems. He possessed the courage and the energy necessary to overcome obstacles. He made a willing sacrifice for the accomplishment of great good in his chosen field.

The good he has done defies appraisal. No sort of statistical analysis, however favorable to his work, can ever give a complete picture of his accomplishments. In a very real sense, he pioneered in the field of Preventive Medicine and Public Health. He set in motion actions which will continue throughout time. In his life and work he has set a noble example of conduct and accomplishments.

H. H. Shoulders, M. D.,
Speaker, House of Delegates,
American Medical Association

He was a devoted friend, loyal to the core, and always kind to those with whom he was associated. His going is a personal loss to me. I always enjoyed seeing him at the different meetings and his bounding enthusiasm and expressions of confidence gave one a sincere enjoyment. He did a great service in his day for the benefit of the people of Kentucky and for numerous agencies in which he was interested. He will be missed greatly by his

native State. I know that the profession of Kentucky will find that his services and loyalty to them were unvarying and helpful. We began health work about the same time and we have trod very much the same road in our effort to contribute what we could to the cause of public health and medicine.

Walter S. Leathers, M. D.,
Dean School of Medicine,
Vanderbilt University

I feel a personal loss in the death of my good friend, Arthur. Not only has organized medicine lost a valuable friend, but the public as well. He will be greatly missed in all medical gatherings where his sound judgment and wise counsel were constantly so right and always well expressed. Arthur and I were friends for about twenty-five years, having first met him at the Conference of State Secretaries, and I had the deepest admiration for his gifted mind and for the sterling qualities of his character.

Frank Hassig, M. D.,
Secretary, Kansas Board of Medical Registration and Examination

Nothing that I can say will express adequately the admiration, respect, and affection that all of us in the Public Health Service have always had for Arthur McCormack, and which will remain in our hearts and minds as long as we live. He was truly a public health statesman of the first order. While everyone in public health, and those in many other fields as well, will ever be conscious of the poignant loss, the standards of efficiency, human understanding, and kindliness for which he was responsible and the everlasting lift which he gave to our profession will guide and strengthen always.

Warren F. Draper, M. D.,
Asst. Surgeon General,
U. S. Public Health Service

Kentucky has lost a public servant that she can never replace. I have lost a truly great friend.

Dan Talbott, Former Director,
Department of Finance,
Commonwealth of Kentucky

He did more in his long and useful life for the achievement of mankind than almost anyone I can recall, and his associates and friends can take comfort in that fact. Won't you please express to others there my profound sympathy in the loss which Kentucky sustains, but which even more especially the country must bear, for Arthur's contribution to the service of the nation was even greater in significance than that which he made to his own beloved State.

Eugene L. Bishop, M. D.,
Medical Director,
Tennessee Valley Authority

The Chicago Heart Association Memorial Fund, founded in memory of Morris Fishbein, Jr., has just received a generous contribution from Dr. and Mrs. Morris Fishbein, 5543 Blackstone Avenue, in memory of Dr. Arthur Thomas McCormack.

Ruth P. McEldowney,
Executive Director

When one such as he is so vital and so important to one as removed as myself, you can be assured of the immortality of such an individual.

John H. Kooser, M. D.,
Frontier Nursing Service

Dr. Arthur, as he was affectionately known, even to those who knew him slightly and, indeed, even to those who disagreed with him, has occupied a unique place in the history of medicine and public health, not only in Kentucky but in the nation. Following in the footsteps of a distinguished father, he added to the distinction of the McCormack name. Those who knew him valued his kindliness and friendship very greatly. Arthur will be missed from the front row of the House of Delegates of the American Medical Association and from the councils of public health workers everywhere. He will be missed but he will not be forgotten.

W. W. Bauer, M. D.,
Director, Bureau of Health Education,
American Medical Association

He has been a great inspiration to me and I feel that he has, without a doubt, made a great contribution to the advancement of medicine.

Commander M. E. Lapham, M. D.,
National Chairman, Procurement and Assignment of Physicians

He was one of the great leaders in the field of public health and preventive medicine, as was his distinguished father, for both of whom I had an affectionate regard. Their names should be added to the list of the real heroes and distinguished dead of Kentucky along with the names of Boone, Lincoln and McDowell.

S. J. Crumbine, M. D.,
Health Consultant of "Save the Children Federation" and former State Health Officer of Kansas

If ever we needed the counsel and ability to intercede gracefully in important matters that were so valuable in Arthur McCormack, we need them now. I know we disagreed with him about a number of things, and that we have criticized him about some things, but we often turned to him in the same matters wherein we disagreed with him, and so far as I know, he never failed to come clean and be helpful.

Norman Taylor, M. D.,
Secretary, Texas State Medical Association

I never loved any man more. His personal charm was in a class by itself; in addition, he was one of the greatest men I ever knew. He had ability given to few. He had information, knowledge, penetrating vision, unsurpassed courage, all geared to a single purpose—to serve mankind. Only a few could have known him better than I. I doubt if anyone knows better than I the contribution he made to the betterment of conditions in this old world. He was able to take the tools with which he worked, and they are found in every State of the Union, and secure a maximum of production in things that benefited folks. His efforts on the national scene have never been equaled, and, in my judgment can never be surpassed.

I am lonely because I must miss the benefit of his wisdom and experience, his wit and repartee, and the vision and purpose which I was permitted to enjoy, while privileged to have a small share in accomplishing his objectives. I loved him much; I learned many lessons in life from him; and so long as I live, his memory will be green.

Fred M. Vinson,
Director, Office of Economic Stabilization, Washington, D. C.

Kentucky medicine has lost a great friend.

Christian County Medical Society

His was a nature that drew men to him, a character that was trustworthy, a life that exemplified the Christian virtues and a faith that made his passing from God's footstool to the throne of Him he so faithfully served only a transition from earth's sufferings to Heaven's blessings. Our association with him at the various gatherings of the Southern Medical Association and the House of Delegates of The American Medical Association did give us an opportunity to know him and appreciate his sterling worth.

J. P. Wall, M. D.,
Jackson, Mississippi

Dr. McCormack knew more about Kentucky and Kentuckians generally, and Kentucky doctors in particular, than any other man of his time. His whole life was spent in service for Kentucky and Kentuckians and Kentucky physicians especially. He never spared himself in advancing their interest. He might have been with us many years if he had taken care of himself. His relations with the Council were most kindly, courteous and cordial, and he always wished each Councilor to express his own opinion on any subject under discussion. His work was never out of his mind and many times he has phoned me, as Chairman of the Council, in the mid-

dle of the night to talk over some problem. His contacts and associations were universal and I always marveled at his wide acquaintance and that he had so many contacts in so many places.

The Council mourns his passing with genuine sorrow and deep regret. All of us enjoyed working with him and benefited by the association, and we shall miss him greatly. Personally, I feel that I have lost a very dear elder brother. I do not believe his like will be seen soon and I do not believe any individual man can take his place in all of the particulars of his work.

Charles A. Vance, M. D.,
Chairman, Council of Kentucky State Medical Association

For more than fifteen years I was intimately associated with Dr. McCormack as fellow members of the Kentucky State Board of Health and in various activities of the medical profession of the State and the many problems of the Kentucky State Medical Association. The most striking and outstanding characteristic of his was two-fold—his love and service for the medical profession of the State and country and his love for and service to all the people of the State. This love of and service to the people grew on him as the years ripened life. All who knew him well will well remember in his talks his numerous references to "The Great Physician," and apparently he became ever more conscious of the reliance he and all of us placed in "The Great Physician." We cherish his memory for his unselfish, untiring and loyal efforts in his chosen profession and chosen line of work with no cessation until the final call of "The Great Physician."

E. M. Howard, M. D.,
President of the State Board of Health and Past President of the Kentucky State Medical Association

The profession has lost one of its outstanding figures and the Southern Medical Association one of its finest friends.

Lucien A. LeDoux, M. D.,
Chairman of the Council,
Southern Medical Association

Dr. McCormack's death is a serious blow to the welfare of the entire nation as well as of the State of Kentucky. It will be a long time before we can find a man capable of filling the doctor's place in public health circles.

S. H. Bow,
Business Representative
Local 281, SCMWA CIO.

After the first shock of deep personal loss of a valued friend and loyal colleague, one reflects with pride and admiration on Dr. McCormack's gift for winning friends and followers, and his leadership in the profession—not only in Kentucky, but throughout the United States. The lapse of each succeeding month projects more distinctly the scope of his achievements for medicine and public health, and accents the importance of his life's work. His spirit and deeds live on in all who knew him and were benefited by his services and one is inspired by the personal attributes of the man whose loyalty to his ideals and devotion to service accomplished so much.

E. L. Henderson, M. D.,
Past President, Kentucky State Medical Association, and Delegate to The American Medical Association

No person except my own father and Dr. Welch of Alabama did more to help me personally and officially than Dr. McCormack. He knew all of that. When Kentucky was transferred from the Public Health Service District No. 2 to District No. 3, he wrote a beautiful letter to the Surgeon General giving his reasons why Kentucky should remain in that District that developed public health work from the local governments' point of view. I will miss my contacts with him.

W. K. Sharpe, Jr., M. D.,
Director, District No. 2, United States Public Health Service

My heart bleeds in the loss of a friend and confrere.

Carl V. Reynolds, M. D.,
State Health Officer,
North Carolina

As I go about my round of duties with the blind children in my home, many memories come to me, memories of Dr. Arthur McCormack, some reaching back many years into the past. One memory very precious to me is this. One August day, fourteen years ago, he was with me in Louisville a few hours after I had learned that my sister's illness would be fatal. He had visited her at St. Joseph Infirmary, and he said to me after he left her—about these words: "Nothing that can happen to her body can hurt her soul." Time and again, in the subsequent months of her agony, I would repeat to her those words of his, and, in recent years, when I have rejoiced in some new effort of his to prevent physical sufferings for Kentuckians, I have called to mind that effort he made to show me that the soul can be supreme over physical suffering.

Linda Neville,
Lexington, Kentucky

All of us who have had the privilege of knowing him as a man, as a friend and as a distinguished physician have suffered a great loss. The entire medical profession and most particularly public health workers throughout the nation will feel his loss very keenly. The contributions which Dr. McCormack made to public health progress, not only in Kentucky but in the entire country, were tremendous and far reaching. Undoubtedly he did more to focus Federal attention upon, and obtain Federal Aid for, State and local health needs than anyone in the country. His personal contributions to raising the level of qualifications and performance of health personnel have been of untold value. The effects of his work will benefit us for generations to come.

Carl E. Buck, Dr. P. H.,
Field Director,
The American Public Health Association

His greatness will remain with each of us.

Robert H. English, M. D.,
Assistant Surgeon, United States Public Health Service

To say that I am deeply grieved over the passing of my friend for nearly forty years poorly expresses my feeling. Arthur was one of the most lovable men I have ever known and I will always cherish my memories of our association in connection with many matters in which we were intensely interested and with respect to which we both tried to carry out what we believed to be our duty as we believed our duty to be. We had some differences of opinion and, on occasion, those differences were brought out into the open in rather pointed fashion, but, in so far as I know, our genuine and lasting friendship was never interrupted for even one minute. That fact, as I see it, bears eloquent witness to his fairness and to the fine qualities of his heart and mind.

Arthur will be sadly missed in Kentucky, the State he loved so dearly, and for which he did so much, and he will be missed very greatly by his many friends in all parts of the nation.

Olin West, M. D.,
Secretary and General Manager,
American Medical Association

Dr. McCormack was the most stimulating influence, within the past ten years or more, in getting started the present State Hospital program which has done so much in improving facilities for the care of mentally ill in Kentucky. The personal qualities and professional accomplishments of this outstanding public health official and medical statesman commanded general admiration. In his passing, the State and the nation have suffered a tremendous loss which will be more fully realized in the years to come. While his major interest for many years was the development of adequate and well-staffed county health units throughout the State, he became, in recent years, fully conscious of the need of a complete rehabilitation of our public hospitals. When the urgency of this need was particularly emphasized at the State Conference of Social Workers at Berea in 1933, Dr. McCormack nominated for President of the Conference, a young newspaper edi-

tor of Richmond, Keen Johnson, who was elected by acclamation and who subsequently became Governor of Kentucky. This indicated not only clever political foresight, but also an almost uncanny judgment of a man who would some day be elevated to a position in which he could really do something about providing adequate care for the State's unfortunate citizens.

W. E. Gardner, M. D.,
Past President, Kentucky State Medical Association

God set him apart for His great work. His big, sympathetic heart was big enough to hold not only Kentucky but the whole country and beyond. He needs no monument of marble or bronze. His monument is builded of material far more imperishable.

J. W. Nolan, M. D.,
Harlan, Kentucky

Dr. McCormack was a fine man, a cherished friend, possessed of the highest of principles and ideals, a characteristic physician, if there ever was one, and one who gave much to his profession and to his country. It has been one of my unique experiences and honors to have been associated with him in several activities and he will be sorely missed in many years to come.

M. Pinson Neal, M. D.,
University of Missouri, School of Medicine

My friendship with Dr. McCormack covered many years, and with it not only did my appreciation of him grow, but all through the State of Kentucky and the nation his forceful energy, vision and ability to grasp a situation put him at the top in health affairs. These qualities were derived from both his father and his mother, who together, imparted to him soundness of mind, strength of character and an unflinching integrity. He courted opposition rather than sidestepped it, and always battled for what he thought was right. One might not agree with him, but one had to respect him, and when the subject came to a debate for solution his rebuffs were few and his successes many. His interests were centered in prevention of disease, prolongation of life, overcoming the spread of epidemics, the production of a virile, strong and healthy people, and the building of a medical profession which would produce great teachers who would train young minds in medicine to think soundly, to act wisely and decently and thus bring health to those who escaped the infective diseases so long prevalent in the very early years. When such a man passes on to his reward, he perhaps, may see and be pleased with the heritage which he has left

J. Garland Sherrill, M. D.,
Louisville

Dr. Arthur T. McCormack was a layman after a minister's own heart. A man of ready tongue, he had with it the rare gift of being a good listener, too. So he was regularly in his pew on Sunday. His was a bright and cheerful Christianity. He had always a kindly, helpful word of encouragement. He was a supporter, not a leaner. Any service of worship was richer for his presence and participation in it. But best of all, he did not close the book of his religion to be opened only on the next Sunday. It was his text book and the inspiration of his life and work. I doubt that there is a single person who ever met Dr. McCormack who did not come to know that he tried to be a humble and faithful follower of the Great Physician, and in His name sought to minister to both the body and the soul of men. Surely he could be included among that number to whom Jesus said: "As the Father hath sent me into the world, so send I you."

Peter H. Pleune, D D.,
Minister, The Highland Presbyterian Church, Louisville

The medical profession of the United States has sustained an irreparable loss in his death, as has the community in which he was so active.

Adolph O. Pfingst, M. D.,
Louisville, Kentucky

Dr. Arthur McCormack was a skilled physician, an inspiring leader. He combined the learning of the scientist with the shrew humor and common sense of the mountain man. He loved little children, and could not bear to see them suffer through our stupidity and cruelty. He had the courage to face the sudden problem of an Ohio River flood, and the less common courage to face the chronic inertia of the public. He persuaded politicians to acts of statesmanship; he shamed communities into the achievement of elementary decencies of sanitation and of health. He was a big man physically, and he was a big man in heart and head.

Our Berea students always greeted his appearance upon the platform with tumultous applause. They knew him as their friend, a friend who loved them too much to tell them sweet stories of the virtues of the mountain people; he loved them too much to lie to them. To them, as to us all, he was the prophet of a Better Day.

Wm. J. Hutchins,
President Emeritus, Berea College

Dr. McCormack's departure from the scene of his activities will leave a very great void in medical circles of Kentucky and all the country. He was the worthy son of a worthy father, and I had an opportunity to observe his many qualifications through frequent contacts with him at various medical meetings, particularly those of a public health character.

H. Sheridan Baketel, M. D.,
Jersey City, New Jersey

He will, indeed, be greatly missed. He stood in a class, alone.

Maurice H. Thacker, Governor,
Society of Mayflower Descendents
in the District of Columbia

I believe that everyone who knew Dr. McCormack and had the privilege of working with him felt the warmth of friendship he manifested, respected his integrity, and was inspired by his untiring devotion to the total field of his endeavors. The untimeliness of his loss is to be regretted, but even more to have this friend pass beyond that curtain where human contacts and counsels can be sought is a deprivation we will feel keenly. The one consolation is that the influence of a person with as dynamic a personality, as great a capacity for friendship, and as tremendous a capacity for leadership in a chosen field as had Dr. Arthur, never dies.

Estelle Ford Warner, M. D.,
United States Public Health Service

I have been on the State Board of Health and closely associated with Dr. McCormack since 1926, and I have seen him under almost every condition. He was just a great big man, big hearted, mentally and physically. He always wanted to do something for the other fellow, and was always a straight shooter, square from the shoulder. We have lost a friend; the world has lost a statesman; preventive medicine has lost one of the greatest fighters it ever had.

J. Watts Stovall, M. D.,
Member, Kentucky State Board of Health

He was one of the most useful Kentuckians who has lived in the last quarter of a century. His great talent as a leader in public health won him national recognition, yet Kentucky it was that reaped the benefits of his great ability as an apostle of public health.

Hon. Keen Johnson,
Governor of Kentucky

Dr. McCormack set a high mark of accomplishment for his successors.

W. G. Campbell,
Commissioner of Foods and Drugs,
Washington, D. C.

:-: SPECIAL ARTICLES :-:

McCormack as a National Figure*

HON. KEEN JOHNSON
Governor of Kentucky

To an audience composed, as this is, largely of his close associates, it would be pointless to dwell on Dr. Arthur McCormack's personal attributes or what he did in promotion of public health and public welfare in Kentucky. In your daily contacts with him, you had opportunities, such as few others did, to recognize and appreciate the personal qualities which commanded from all those under him an exceptional degree of respect, admiration and loyalty. Working with him, year in and year out; catching, in varying measure, the spirit of his dreams and helping, according to your several abilities, to translate those dreams into realities, you are in best position to know and properly to evaluate the deeds which he wrought for the advancement of this Commonwealth and for the health and happiness of its people.

Probably you are not so familiar with his achievements in the national field, in which he was an outstanding figure. Indeed, his reputation and activities were not confined to the national borders. Within the last quarter of a century, whenever and wherever the leaders in public health in the United States and the Canadian Dominion gathered to discuss policies and procedures, he was present or the chair set aside for his occupancy became conspicuous by his absence. Everywhere, his broad vision, sound judgment and almost uncanny ability to foresee how any proposed policy or procedure would work out in actual practice were generally recognized and gave weight to whatever criticisms, suggestions or recommendations he might offer. Few men, if any, in this country have been more influential in shaping and guiding the public health activities which have given the United States an enviable position in this respect among the world's progressive nations. Few men, if any, in this country have been honored as was Dr. McCormack by leadership in the organizations engaged in these activities. He served as President of both the Conference of State and Provincial Health Authorities of North America and the American Public Health Association, was a member of the National Health Council and the National Tuberculosis Association, and, for many years, acted as Special Consultant to the United States Public Health Service. He organized and was Dean of the School of Public Health of the State Board of Health, which was subsequently taken over by the University of Louisville, School of Medicine.

In medical organization, Dr. McCormack was equally prominent. For twenty-three years he was continuously a member of the House of Delegates of the American Medical Association, and, in that capacity, had no small voice in the formulation and prosecution of policies which have given the American people the highest type of medical service anywhere in the world. As Secretary of the Kentucky State Medical Association for more than thirty years, he made invaluable contributions to the keeping of this Association in the very forefront of such organizations in this country. He founded, in 1903, the Kentucky Medical Journal and continued as its Editor from that time until his death. He served as President of Medical Veterans of World War I, and of the Southern Medical Association, and was a Fellow of the American College of Surgeons.

The officially recorded activities of Dr. McCormack by no means measure the full extent of the influence which he exerted in moulding public health and medical policies and practices in the United States. His interest in problems in these fields was as catholic in scope as it was intense in character; his advice and assistance in solving them were constantly and generally in demand throughout the country. Little or no legislation affecting either was introduced in Congress, with the backing of organized public health authorities or organized medicine, which he did not have a part in formulating and which he did not champion with all the dynamic energy of which he was possessed. By the same token, he was always in the forefront in opposing any proposed legislation which organized health authorities or organized medicine considered injurious to the public welfare and, so, detrimental to their own interests. His wide acquaintance among members of both the Senate and House of Representatives, coupled with his tactfulness, diplomacy and unusual ability to make his arguments strike home, made him an especially forceful protagonist or antagonist. His efforts in opposing destructive

*Address delivered at Memorial Exercises, Auditorium, State Department of Health Building, Louisville, November 29, 1943.

legislation were, in the last analysis, equally important as those exerted in behalf of constructive legislation.

Dr. McCormack concerned himself not alone with matters affecting public health and medicine. No phase of human welfare was foreign to him. The extent of his influence on general legislation, particularly social legislation, would be difficult to estimate. Not only was he frequently called to Washington for consultation in connection with measures about to be introduced or pending in Congress, but the provisions of many of these measures, as finally enacted into laws, were written by him.

It is not to be inferred that Dr. McCormack's activities in the national field were permitted to interfere, in any degree, with his duties and obligations as State Commissioner of Health. Kentucky and its interests were always his first consideration. Time and again, during his long career, flattering offers were made to him of positions in both national and international fields. In every instance, the offer was flatly rejected, although the salary attached was two or three times as large as that which he was receiving in Kentucky or which he could hope to receive under the limitation imposed by the State's organic law. He loved Kentucky and her people and delighted to serve them, regardless of whatever monetary or other sacrifice might be entailed. Only once did he sever his connection with the State Board of Health, and that only temporarily and in response to a patriotic duty. When the United States entered World War I, he turned the executive direction of the Board over to his father, the Founder of Public Health in Kentucky, entered the Medical Corps of the United States Army and immediately set about organizing a base hospital for overseas service. It is doubtful that even the call of country would have then prevailed had he not realized that the cause of public health in this State would not suffer during his absence. Before the unit was ready to sail, he was ordered by General Gorgas to proceed to Panama as Chief Health Officer of the Canal Zone, in which position he rendered distinguished service. When mustered out at the close of the war, he returned at once to Kentucky, resumed his duties as State Health Officer and so continued to the end of his life.

It is no exaggeration to say that Dr. McCormack was among the most useful citizens of his generation. To him, not Kentucky alone, but the whole country, owes a debt of gratitude which it would be impossible to overestimate. Because of him, tens of thousands of people still living today would have died premature deaths; because of him, other tens of thousands yet unborn will live longer, happier and more productive lives.

In feeble recognition of this fact, the addition to Hazelwood Sanatorium, whose cornerstone was laid only a few weeks ago, has been designated The Arthur Thomas McCormack Memorial Sanatorium. By the same token, this addition to the State Board of Health Building, in which we are now gathered and for whose erection he was primarily and largely responsible, is soon to be graced with a plaque to his memory. It is altogether fitting that we should thus memorialize one who served so long, so well and so faithfully the people of Kentucky in particular and humanity in general. The best and most lasting monument to his memory, however, is to be found in the results of his efforts to promote human health and human happiness. Any structure of brick, stone or steel which human ingenuity can devise, will eventually and inevitably yield to the rodent tooth of time or the vandal hand of man; the evidences, tangible and intangible, of Dr. McCormack's labors in behalf of public health and public welfare will continue to manifest themselves in a constantly inceasing degree of health, happiness and productive ability for all the people, through all time to come.

An Unforgettable Figure

IRVIN ABELL, M. D.
Past President, American Medical Association

Dr. Arthur McCormack possessed a combination of qualities not often vouchsafed to one individual. Ability and judgment, unlimited energy, tact and resourcefulness, a charming personality and a fluent command of speech, together with loyalty to his friends, his profession and his State, combined to make him an unforgettable figure. It has been given to but few, if any, to render comparable constructive service for a quarter of a century, the length of time he served as health officer, a service which loyalty to State impelled him to continue in the face

of opportunities to go elsewhere at greater remuneration. We shall ever hold him in grateful remembrance, with his attainments serving as an incentive and stimulus worthily to exemplify the high principles of the profession and faithfully to practice the humanities.

McCormack, A Man Of Many Parts

J. B. LUKINS, M. D.
Past President, Kentucky State Medical Association

For thirty years, the greatest individual force in medical administration and public health work in Kentucky was Dr. Arthur McCormack. He was truly a man of many parts. I first remember him the day that I went to register and receive my State Board of Health certificate to practice medicine. I was very young and inexperienced, but I was impressed by his large head, his boyish manner, his inquisitive eyes and his kindly smile.

Arthur McCormack was of the soil. He was interested in all doctors; in fact, in all people, but his instincts and many of his traits throughout his life were those of the country boy. One of his chief concerns in life was the welfare of the general practitioner, the country doctor. He was the friend, in fact, the intimate, of most of the medical leaders of our country, but I doubt that he ever quite appreciated the services of the specialist or the prominent surgeon as he did the work of the country practitioner.

We all know well the emphasis that he placed on membership and attendance in county societies. This is the foundation and life blood of all organized medicine. Under Dr. McCormack's leadership, we saw health work in Kentucky develop from small units in a few counties to a fully formed organization, covering the entire State—an organization that is now considered the equal of any in the United States. The Kentucky State Medical Association has been unified and developed until its progress and achievements are the admiration of all.

One of Dr. McCormack's main fortes was his ability to size up people. In his judgment of men, and particularly of doctors, he was rarely mistaken. In some instances, he was very patient and long suffering. In certain situations, he was often criticised for not endorsing certain men or measures when his only reason for withholding endorsement was that the time was not ripe. Personal motives played little or no part in shaping his policies.

The physically handicapped, the ignorant, the indigent, the neglected, of the State were all of vital concern to him. So many of these underprivileged people have been given a chance in life, through his influence and direction, that it makes an imposing array of useful citizens.

In my life, Dr. McCormack was the original propagandist. Often in conversing about the most commonplace things, he injected ideas which, if developed, would be of the most vital concern to our profession and to our country. For twenty-five years I worked with him almost continuously in the State Association, and in all this time I never heard him say "We must oppose this," or "We must endorse that." He suggested frequently, but directed rarely.

He was a man of almost prophetic vision. He discussed with me many times the increasing scarcity of doctors, particularly in rural communities. He was gravely concerned about the lack of medical care in many counties, but he was never willing to compromise with the prevalent doctrine of economic scarcity. He believed that the functions of the medical profession should be expanded and the employment of doctors thereby increased. He believed that the State was not doing its full duty until it provided good roads and adequate health centers for diagnosis and treatment where the poorest could receive the best of modern care, and our doctors become up to date practitioners.

He had a commanding personality, and if destiny had placed him in business or in one of the other professions, he would still have been a leader.

"It is for us the living" to carry on the traditions thus established in our State Association, and further unify this great organization that it may continue to fulfill the function for which it exists—the promotion of human welfare.

Dr. McCormack's memory needs no monument of stone or granite. The people of Kentucky whom he has helped, the great Board of Health of which he was executive head for so many years, and our militant, progressive, upstanding doctors who compose the Kentucky State Medical Association are the monuments to the memory of his life and character.

One Who Loved His Fellow Men

JAMES H. PRITCHETT, M. D.
President, Kentucky State Medical Association

"A king once said of a prince struck down,
'Taller he seems in death.'
And this speech holds true for now as then
'Tis after death we measure men."

I knew Arthur T. McCormack intimately. He gave me, as a neophyte in medicine, the same warm fraternal welcome and professional attention as did he to such men as McMurtry, Morgan Vance, Aud, Joseph B. Marvin and others. To me, his great achievements were due to his simplicity, graciousness, unswerving devotion to duty, and his untiring efforts to place Medicine and Public Health in Kentucky second to none. These achievements were but the results of his natural ability, plus the rich experience handed down by his illustrious father, Dr. J. N. McCormack, from whose hand he grasped the flaming torch and carried it to even greater heights.

Dr. McCormack was a great Kentucky citizen, an eminent Health Commissioner without a peer. Few people disliked him and most of us loved him. Truly he could have said, "Write me as one who loves his fellow men."

Arthur T. McCormack, M. D.

AN APPRAISAL

OSCAR O. MILLER, M. D.
President-Elect, Kentucky Medical Association

How shall we appraise a man? By his personality, by his friends and capacity for friendship, by his philanthropy, by his contributions to society or by his work? Perhaps the latter, for "By their works ye shall know them."

Dr. Arthur McCormack stood closer to the profession than any other man of our day and time. He knew every part of the State and its medical needs. His hero was the country doctor, and he had a keen appreciation of the qualities that were requisite for the fashioning of one. Highly specialized training was anathema to him, for he felt that it forever robbed him of a good practitioner and institutionalized the individual and deprived him of initiative.

He knew the needs of his people and wanted men well trained in the fundamentals of medicine and surgery—men who could render the most to the communities that needed them most. He felt that overspecialization stultified the individual. He was jealous of the profession and did everything in his power to safeguard its principles and ethics.

His first concern was the health and welfare of the citizens of the State. He knew this could be achieved only by a well organized and progressive medical profession. He safeguarded medicine at every turn and saw to it that the law provided for representation by the profession on boards where it was most competent to serve. The State Health Commissioner of Kentucky was, I am confident, better known than any other health officer of his generation—no shrinking violet, he! His massive frame, his erect carriage, his leonine head, his confident and calm assurance, his imperturbable equanimity and his commanding flow of rhetoric stamped him as a man among men—a commanding figure in any audience, anywhere, a worthy representative of a great State.

His contribution to public life was enormous: first, through the profession that he loved so well and, second, through the wise public health legislation which he wrote or was instrumental in having written into the statutes, State and Federal. There is not a home, from the humblest to the most affluent, that is not the beneficiary of the safeguards he threw around them.

He had a warm personality, an engaging smile, and a hearty handclasp; he had many friends and not a few enemies; he fought for principles and not against personalities; he had a prodigious memory for men and events. In these respects, Arthur T. McCormack was an outstanding citizen, who made a notable contribution to his generation and time.

Kentucky Came First

D. P. CURRY, M. D.
Former Assistant Health Officer
Panama Canal Zone

The year 1917 saw us in the war, most of us who were young enough, in uniform. Dr. McCormack, then a Major in the Medical Reserve Corps, was busy organizing the Kentucky doctors for service in the Army when, early in 1918, he was personally selected by General Gorgas, the Surgeon General, to go to Panama as Chief Health Officer of the Canal Zone, the position in which Gorgas had achieved his

own deathless fame, and whose needs he knew intimately.

Kentucky was not altogether unknown to the Canal personnel—several of the Governors, the American Minister, and other high officials of the Canal, the Army and Navy, the Church, and of big businesses were Kentuckians who had rendered notable service there. But it remained for Dr. McCormack to make his State even more notable. Naturally, when he needed new help from the States, his thoughts returned to Kentucky, and he picked those whom he knew and believed qualified for the jobs. Even the cumbersome and often inconvenient United States Civil Service rules and regulations did not always stand in his way, nor did higher authority, from the Governor down. Doctor McCormack had been dealing with "Governors" all his life, back in Kentucky, and at least he never *feared* them. During his regime there, one newspaper wag suggested that the name of the Ancon Hospital (now the Gorgas Hospital) be changed to "Old Kentucky Home." Doctor McCormack clipped the paragraph and sent it to the Governor's desk, with the recommendation that it be done. Even more than General Gorgas, Doctor McCormack had the faculty of prevailing over ignorant (or sometimes just stubborn) higher authority without arousing resentment. A Governor of the Canal Zone once said to me, "I don't always like to do business with Doctor McCormack, but I had rather have him for a neighbor than any man I know."

Some of the achievements of Doctor McCormack in Panama are well known to the world; such as the completion of the beautiful permanent structures of the Ancon (Gorgas) Hospital, and the combatting of an epidemic of meningitis on a great Japanese liner (for which he made the Japanese pay a handsome sum to the Canal and was decorated by the Emperor). Always, in time of war, the Supreme Command of the Panama Canal Zone is vested in the commander of the military forces there. One of the most pressing problems at the time of Doctor McCormack's arrival there was that of venereal disease control among the troops. Energetically working with the Commanding General, he organized a venereal disease campaign that rocked the neighboring Republic and its landlords to their heels. But while Doctor McCormack remained, the lid was on pretty effectively, and to this day those who lived and profited by prostitution shudder at his name. After his departure, the powers that were on the Isthmus and at Washington, decided that, in spite of treaty obligations regarding disease control, prostitution was solely a matter for the Panamanian authorities, with all the camouflage that license entails. Doctor McCormack also approved a plan for broadening the malaria control work, recognizing the newer experiences of workers in that field elsewhere throughout the world, including intensification of the more economical and effective "species control" of the more potent carriers of the disease. After his departure, those plans were laid aside by a reactionary successor. Several years later, however, they were put into effect and are still being followed.

Where McCormack sat was the head of the table. I have seen him at gatherings of the highest dignitaries of the two Governments, the Army, the Navy, the diplomatic corps and visiting officialdom of other countries, and always he was the center of interest, towering above the others in stature, wit and wisdom, and conversation. But the element in Doctor McCormack's make-up that stands most prominently in my memories of him is the evident love he had for his friends. Like Abou ben Adhem, he led all the rest. Never did I know him to harbor malice or ill-feeling of a personal nature.

Though I realize how great was his value to his State and to the whole nation, I also realize that others are more able than I to do justice to him in that regard. To me he was a greatly loved friend, just as he was to multitudes of others; and as little drops of water make the mighty ocean, so do the many like me, insignificant singly, but whose experience, too, has been like mine, make up the great body of people who loved and were loved by Arthur McCormack— and profited greatly by that love.

Memorial Tribute To Dr. Arthur T. McCormack

Woman's Auxiliary To The Kentucky State Medical Association

An all-pervading sadness rests like a shadow on our hearts as we convene today. Death has claimed our great physician, our great health officer, our great humanitarian, whose deeds have stimulated us in service to the medical profession which he loved and served so de-

votedly. His counsels have guided us and his abiding faith in the ability of women to render real service has inspired us.

Dr. Arthur T. McCormack organized the Woman's Auxiliary to the Kentucky State Medical Association as a companion organization, component, active, understanding—yet, subordinate to its parent, the Medical Association—at Crab Orchard Springs, September 19, 1923. Down through the discouraging years since that time, he strove to strengthen this organization and secure recognition for it. He urged his colleagues to have greater confidence in, and give greater aid to, our women in their attempts to serve. Always, however feeble our efforts, or limited our accomplishments, he made us conscious of his enduring faith in our ability to render worthwhile service for human betterment.

The glory of his service to the people of his State and Nation in building better health for all people will shine with undimmed brilliance throughout the years.

To paraphrase Lincoln, 'The world will little note, nor long remember, what we say here; but a grateful people will never forget what he did here. It is for us, the living, rather to be dedicated to the continuance of his work, so nobly begun and far advanced.'

As a small tribute to him whom we loved and mourn today, we solemnly dedicate ourselves to the task before us, pledging greater effort in service for the benefit of our fellowman, and here determine that the Woman's Auxiliary will give the full measure of devotion to the support of organized medicine, through the various avenues he developed, as instruments or tools of the Medical Association, to the end that, when we meet his matchless spirit in the Realm Beyond the Stars, we may, with truth, answer: "In so far as capable, we have been worthy of your trust; we have fought the good fight; we have kept the faith, so that those things to which you gave your life may endure and bless generations yet to come."

Public Health The Basic Factor Of Social Security*

ARTHUR T. McCORMACK, M. D.

It is perfectly obvious to the thoughtful citizen that public health policies and administration should be under the control and guidance of the organized medical profession. From the public health standpoint, it must be admitted that the present training of physicians is based too largely on the recognition and knowledge of the pathological and the methods of arrest or cure; too little on the recognition and knowledge of the normal and the desirability of its protection and preservation. The leaders in medical organizations realize this and they will solve this problem, as they have solved others far more difficult which have confronted them.

Will you not here pause and consider with me for a moment what has already been accomplished under medical leadership? Cholera and yellow fever and similar plagues are now historic to our people. Smallpox, which 150 years ago was the greatest scourge of mankind, is entirely eradicated among the intelligent. Diphtheria and typhoid fever are approaching the vanishing point. The incidence of tuberculosis has been decreased 90% during this century, and enough money has been saved from lower morbidity and mortality from this one disease alone to pay the cost of our State and Federal highway system. It has been clearly demonstrated that scarlet fever is eradicable, and it is almost certain that whooping cough is. Massachusetts and New York are proving the possibility of reducing the annual death toll from pneumonia by 50% or more, and cancer control in these two great States is approaching a standard of excellence that will cause all of the other States to imitate their methods. Less has been done in controlling syphilis and gonorrhea than any other major pestilence, but under the fine leadership of Dr. Parran, this shadow on the land is destined ere long to disappear under the actinic rays of scientific knowledge properly and continuously applied wherever an individual harbors these dread infections.

The death rate in Kentucky has been reduced two-thirds in 27 years, and the life expectancy has been increased from 32 to 60 years. You should warn your people, however, that this low rate cannot be continuously maintained, because eventually those who have been saved from unnecessary illness and premature death during their earlier or productive years will succumb to the degenerative diseases of age, which are only now beginning to be studied with a view to their control and elimination.

It should be remembered when Dr. Gor-

*Excerpt from Presidential Address delivered before the American Public Health Association at the Sixty-sixth Annual Meeting in New York, N. Y., October 7, 1937.

gas went to Panama to assume control of its health department he found that the French had known as much about engineering, as much about labor mobilization and organization, as much about the commissary and its management, as we did; but he found that half the Frenchmen who came to build the Canal died with yellow fever or malaria before they had time to take any part in digging the great waterway. His complete and rapid eradication of these diseases changed the whole picture of life on the Isthmus, which was rapidly transformed from one of the pestholes of the earth into the healthiest spot in which men live and work. It should be recalled that, instead of reducing the quantity or quality of those engaged in medical service, this happy condition increased both, because recognition and preservation of health required a more highly trained personnel, and the discovery of incipient disease while it is still curable is far more time consuming and difficult than the diagnosis of fatal illness and its resultant postmortem. When it is considered that the death rate in the Canal Zone is today, and has been for twenty years, about half that of the registration area of the United States, and that the morbidity rate is approximately one-twentieth of that of this country, it can be demonstrated to any thoughtful appropriating body that public health is purchasable and that good health can be secured for any State or community willing to pay the price.

You and I may sometimes feel discouraged and irritated by the ignorance and parsimony of officials and appropriating bodies, but the victories for health which Dr. Gorgas won in the Canal Zone were won in spite of the constant and malevolent opposition of his superior in control of the construction. Dr. Gorgas was fighting for humanity and he never lost his temper and never failed. He set an example in scientific knowledge, sound administrative procedure, development of trained personnel, persistency against official contumacy and opposition, and tact and diplomacy against apparently overwhelming control, which gives his memory to us as that of the ideal health officer, the ideal official, the ideal gentleman.

We must not only have freedom from pernicious partisan politics in our State, federal and local health organizations, but we must have continuing learning on the part of every individual connected with them, whether these individuals be physicians, nurses, engineers, dentists, educators, sanitary instructors or inspectors, technicians or the stenographic and clerical assistants. This was provided in the Social Security Act. Not only should it be continuous in the staffs of the state departments themselves, but the personnel from groups of contiguous counties should be assembled at regular intervals for the acquisition of newer knowledge, comparison of methods and for that attrition of mind against mind that has been largely responsible for progress in the science of medicine through medical society meetings, as well as in formal refresher courses and graduate courses in universities having established departments of public health education.

What shall we do about medical service for those who are ill? I would urge that we make it our first objective to do well what we have already had assigned to us by the common consent of all the people, with the approval of the medical profession, in the public health field. We should oppose, at all hazards, the socialization of medicine. We should give every assistance to those of our profession engaged in the practice of curative medicine in the solution of their problem of medical care of the indigent and of those only partially able to bear the cost of illness. The medical profession of America has proudly carried on the traditions which have been handed down from leader to leader since the days of Hippocrates. Sometimes the banner of science has seemed to be beyond the horizon of those who most needed its encouragement; but it has always been found again and borne aloft by succeeding generations of those who have given this great service to mankind. Every other progressive agency has helped to promote and improve civilization, but no other can claim to be, or be acclaimed as a more faithful servant of mankind. Be assured that the American Medical Association, its autonomous constituent State associations, and component county societies are fully alive to their responsibility. Be not impatient with their progress. Prod and threaten them a little, if you will. Remember that they have always lived up to their responsibility to the people of this country and they always will. It is perfectly obvious that so great a service organization would, if it could be assimilated and controlled by any one of the social

groups that would put their unhallowed hands upon it, be a conquest whose value would be beyond computation. But let these groups beware, because if they should win such a costly war, it would become a Pyrrhic victory. The finer qualities that now characterize the physician would soon disappear in the routine of the official. As for the public health group in the medical profession, it behooves us to remember with pride the research, the achievements, the service, the lives of those who made all our knowledge possible. And we should recall constantly to ourselves, to our brethren, and to all the world that we are physicians, doctors of medicine, proud of our calling, ready to modify our plans and our methods whenever better ones can be devised. So long as we do this, we may look forward to the future unafraid.

It is not enough to stop with this tribute to medicine. It was about 72 years ago that the Lady of the Lamp walked through the darkness of the Crimea, and with a tiny spark, aroused a force that has inspired the world. Yet for 40 years after Florence Nightingale lived and worked most people died during the ministration of Sairey Gamps. Clara Weeks and her associates began the systematic education of nurses within the memory of many now here. We have just celebrated the 25th birthday of the National Organization for Public Health Nursing. The public health administrator who would not bow to this fine group of those who serve would fail to recognize the right hand of medicine.

The work of the sanitary engineer needs neither recognition nor encomium from me. It is he who has made the city and the large industrial plant possible, and he is now robbing the countryside of many of its lurking dangers. It is to be doubly regretted that this splendidly developed and highly trained group of specialists should have been ignored and the whole principle of states relations should have been violated, by the ill advised inclusion in the last River and Harbors Bill of an amendment providing for a survey of stream pollution in the Ohio River by the Army Engineers. They are unacquainted with this subject, untrained in the solution of the problems involved, and their recommendations will be without real value. It is to be noted that the bill was signed with a protest by President Roosevelt against the transfer of this activity from the Public Health Service to the War Department. I strongly recommend that the Association again endorse the Vincent-Barkley Bill as it passed the House of Representatives. This legislation was prepared by joint committees of this body and the State and Provincial Health Authorities of North America, and its enactment was delayed in the last session by an attempt to provide for federal injunctive processes in connection with problems wholly within the province of the various health authorities.

In public health administration we are finding important support from one of the oldest professions, which has, within a decade, developed a remarkable attitude toward modern dentistry's responsibility to public health. The researches of Billings and Rosenow in focal infections, seemed, for a time, to fall on the deaf ears of the old time mechanical dentist, but the improvement in dental education has quite kept pace with that in medicine. The modern dentist is quite as much a part of the force that is improving public health as is any other profession. It is a particular pleasure to welcome a large group of dentists who are specializing in oral health into membership into this Association, to whose proceedings they can contribute much of practical interest.

In those engaged in public health education, I desire to recognize both those who must interpret us to ourselves and those who must make our purposes, methods and objectives understood by the people. Theirs is truly a Herculean task and they are making fine progress toward its accomplishment.

I would express your appreciation to the sanitary instructors and inspectors, the technicians, the stenographers and clerks who are the burden-bearers in all of our work. It is not theirs to shine in the light of public approval, and yet, without them, how much slower would be our progress, how much more difficult our job.

In conclusion, may I say, that in the majority of the states, we are ready to take the next step. We need to secure larger, better trained personnel; to have more laboratory facilities; to have better equipment for our statisticians and technicians; and more travel for our field personnel. We need above all, to have more money for those county or district health departments where the human and economic needs are too great for them to bear this cost alone. To do all this, we need

more money; to secure it, we need to integrate our service in public health, first, with the medical profession, and then with every other social agency, including the great organizations of women who have given such active and intelligent support to public health progress, whose special value to themselves and their children they recognize. After all the American people must decide whether they want freedom from syphilis and tuberculosis, a reduced health rate from cancer and pneumonia, less blindness and crippling, and increasing happiness and health in old age. If they determine that they do, they must, in addition to their support of their own physicians and nurses who care for them when they are sick, pay the cost of the increased community service which we know how to render and can render at a per capita cost so insignificant, in comparison with the beneficence of its results, that it may be easily justified of all men.

I invite you, one and all, to join me in a reconsecration of ourselves in that spirit of service which the Great Master so nobly exemplified, remembering always that the Great Physician was also the Great Teacher, the Great Social Worker, the Great Laborer, and the Great Humanitarian—one who considered nothing foreign to him which affected in any regard the welfare and happiness of mankind. I invite you to wear with me an invisible uniform, yet one which, whether worn by us or by those engaged in the great allied services, will be universally recognized as the uniform of an army battling for humanity—that men may have sounder minds in sounder bodies and thus be enabled to labor, to reason, to live and to produce, more happily, more effectively and more abundantly.



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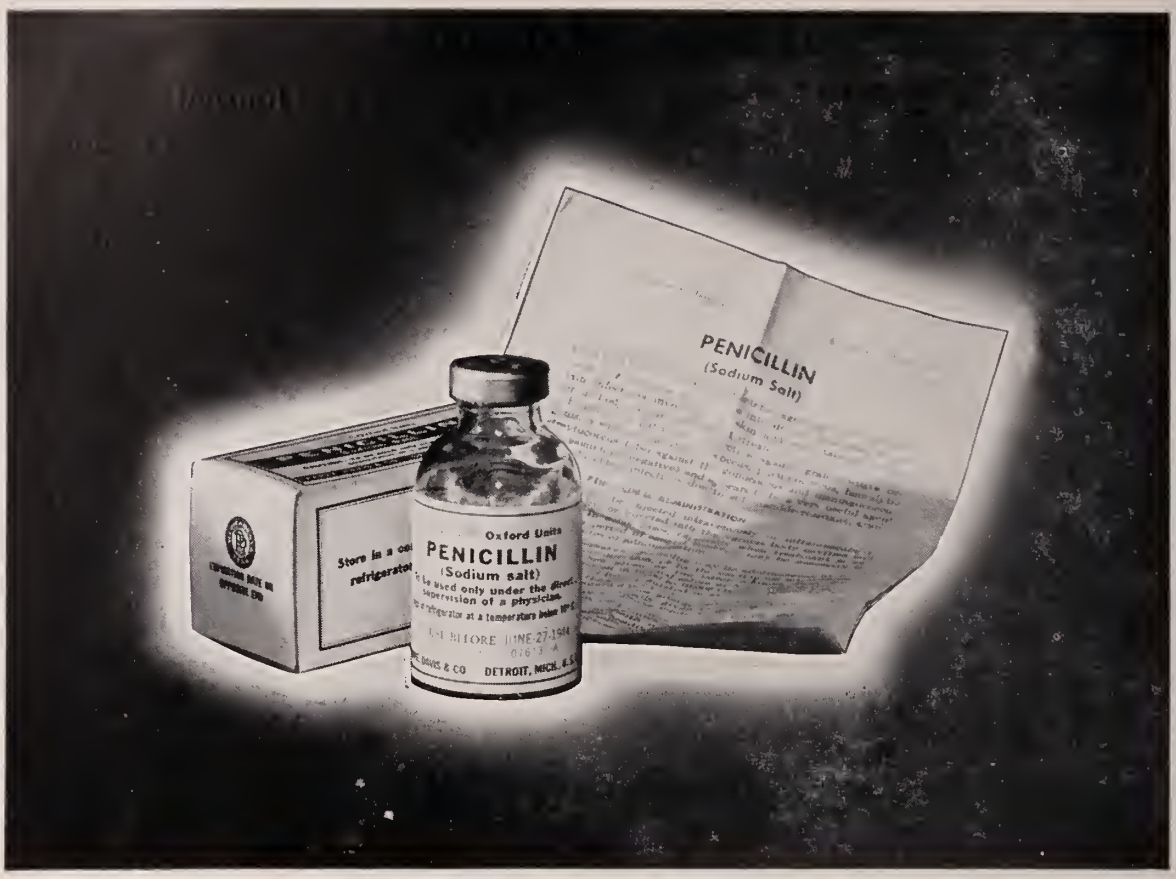
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President
LOUISVILLE & NASHVILLE RAILROAD

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**Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154. Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60. Proc. Soc. Exp. Biol. and Med., 1934, 32, 241. N. Y. State Journ. Med., Vol. 35, 6-1-35, No. 11, 590-592.*

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ANNUAL NUMBER

ANNUAL MEETING, LEXINGTON, SEPTEMBER 18, 19, 20, 1944

KENTUCKY MEDICAL JOURNAL

Published Monthly by the Kentucky State Medical Association Under the Supervision of the Council

VOL. 42, NO. 9 | BOWLING GREEN, KY. | SEPTEMBER, 1944

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Editorial and Business Offices, 519 Tenth Street — Subscription Price, $5.00; Single Copy, 50 cents
Entered as second-class matter, Oct. 22, 1916, at the Post office at Bowling Green, Ky. Acceptance for mailing at special rates postage provided for in Section 1103, act of October 6, 1917, authorized May 25, 1920.

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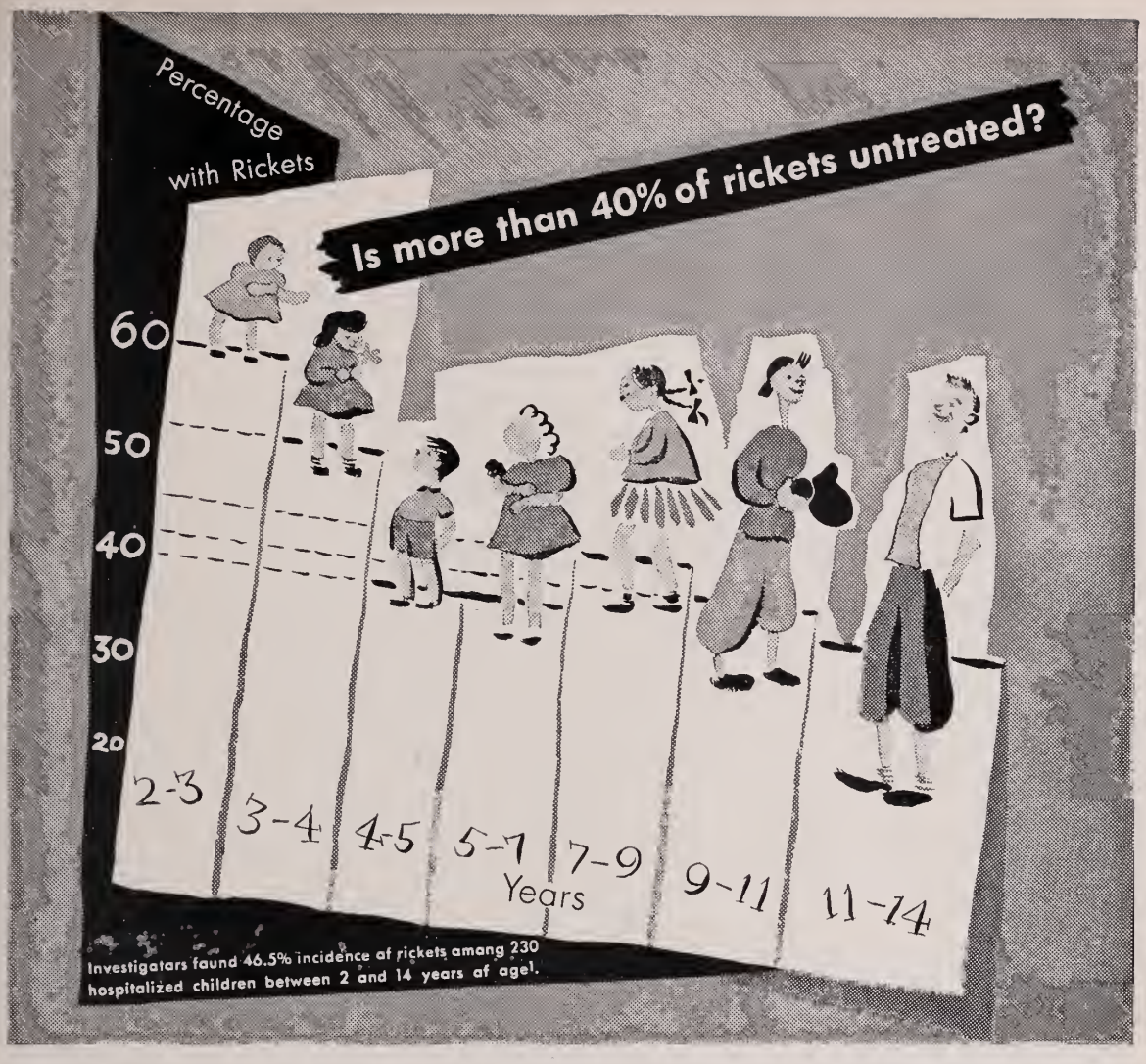
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1. Follis, R. H.; Jackson, D.; Eliot, M. M., and Park, E. A.: Am. Jrl. Dis. Child. 66:1 (July) 1943. Note: A reprint of this paper is being mailed to all physicians. Additional copies are available upon request.

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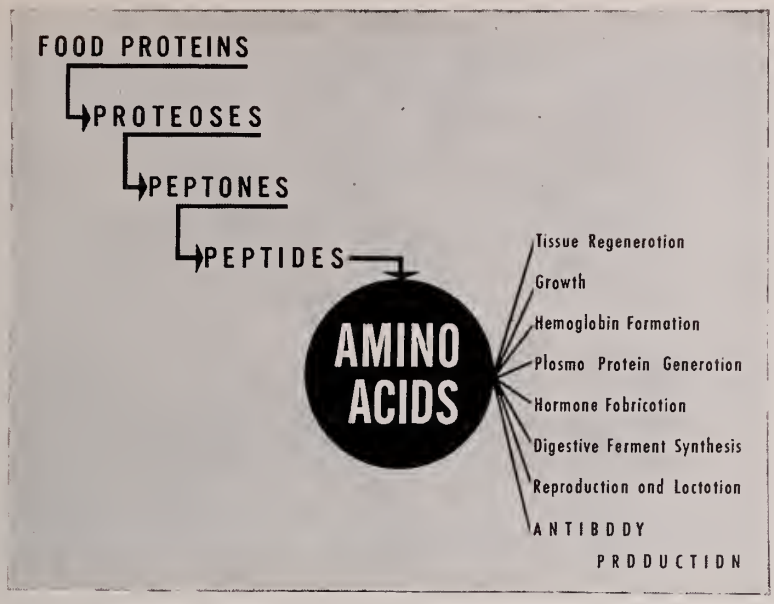
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Allen	A. O. Miller	Scottsville	September 27
Anderson	J. B. Lven	Lawrenceburg	September 4
Ballard	F. H. Russell	Wickliffe	September 12
Barren	C. R. Markwood	Glasgow	September 20
Bath	H. S. Gilmore	Owingsville	September 11
Bell	Edward S. Wilson	Pineville	September 8
Boone	R. E. Ryle	Walton	September 20
Bourbon	D. B. Thurber	Paris	September 21
Boyd	Price Sewell, Jr.	Ashland	September 5
Boyle	P. C. Sanders	Danville	September 19
Bracken-Pendleton	W. A. McKenney	Falmouth	September 28
Breathitt	M. E. Hoge	Jackson	September 19
Breckinridge	J. E. Kincheloe	Hardinsburg	September 14
Bullitt	Geo. B. Hill	Mt. Washington	
Butler	D. G. Miller, Jr.	Morgantown	September 6
Caldwell	W. L. Cash	Princeton	September 5
Calloway	J. A. Outland	Murray	
Campbell-Kenton	Robt. L. Biltz	Newport	September 7
Carlisle	E. E. Smith	Bardwell	September 5
Carroll	H. Carl Boylen	Carrollton	
Carter	Don E. Wilder	Grayson	September 12
Casey	Wm. J. Sweeney	Liberty	September 28
Christian	William F. Fidler	Hopkinsville	September 19
Clark	W. Carl Grant	Winchester	September 15
Clay	L. H. Wagers	Manchester	
Clinton	S. F. Stephenson	Albany	September 16
Crittenden	C. G. Moreland	Marion	September 11
Cumberland	W. F. Owsley	Burkesville	September 6
Daviess	Frank J. Condon	Owensboro	September 12 & 26
Estill	Virginia Wallace	Irvine	September 13
Fayette	Chas. D. Cawood	Lexington	September 12
Fleming	Roy Orsburn	Flemingsburg	September 13
Floyd	Robert Sirkle	Weeksbury	September 27
Franklin	E. K. Martin	Frankfort	September 7
Fulton	John G. Samuels	Hickman	September 13
Gallatin	J. M. Stallard	Sparta	
Garrard	J. E. Edwards	Lancaster	September 21
Grant	Wallace Byrd	Williamstown	September 20
Graves	H. H. Hunt	Mayfield	September 5
Grayson	E. B. Deweese	Caneyville	
Green	S. J. Simmons	Greensburg	September 4
Greenup	Virgil Skaggs	Russell	September 8
Hancock	F. M. Griffin	Hawesville	
Hardin	D. E. McClure	Elizabethtown	September 14
Harlan	W. R. Parks	Harlan	September 16
Harrison	W. B. Moore	Cynthiana	September 4
Hart	Vincent Carrao	Munfordville	September 5
Hendersou	Walter L. O'Nan	Henderson	September 11 & 25
Henry	Owen Carroll	New Castle	September 14
Hickman	H. E. Titsworth	Clinton	September 7
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Logan	E. M. Thompson	Russellville	September 6
Lyon	H. H. Woodson	Eddyville	September 5
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McCreary	R. M. Smith	Stearns	September 4
McLean	F. L. Johnson	Livermore	September 14
Madison	F. M. Melton	Richmond	September 21
Magoffin	Lloyd M. Hall	Salyersville	

COUNTY	SECRETARY	RESIDENCE	DATE
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Marshall	S. L. Henson	Benton	September 20
Mason	C. W. Christine	Maysville	September 13
Menifee	E. T. Riley	Frenchburg	
Mercer	J. Tom Price	Harrodsburg	September 12
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Monroe	Geo. E. Bushong	Tompkinsville	
Montgomery	D. H. Bush	Mt. Sterling	September 12
Muhlenberg	E. L. Gates	Greensville	September 12
Nelson	W. Keith Crume	Bardstown	September 20
Nicholas	T. P. Scott	Carlisle	September 18
Ohio	Oscar Allen	McHenry	September 6
Owen	K. S. McBee	Owenton	September 7
Owsley	W. H. Gibson	Booneville	September 4
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Pike	S. B. Casebolt	Pikeville	September 7
Powell	I. W. Johnson	Stanton	September 4
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Oscar O. Miller

PRESIDENT KENTUCKY STATE MEDICAL ASSOCIATION 1944

KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

Published Under the Auspices of the Council

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PRESIDENT-ELECT

O. O. MILLER, M. D.

Louisville

Dr. Oscar O. Miller was born in Sydney, Australia, 1884. Came to America in January, 1908. Graduated from University of Louisville School of Medicine in 1911. Physician in charge of Hazelwood Sanatorium in 1911-1918, and later became Medical Director, Waverly Hills Sanatorium, Tuberculosis Clinic and field work. Associate Professor of Clinical Medicine, University of Louisville; Diplomate Board of Internal Medicine Certified in Tuberculosis (1937), Fellow American College of Physicians 1928. Member of National Tuberculosis Association, Medico-Chirurgical Society, American Trudeau Society, American Medical Association, Southern Medical Association, and Kentucky State Medical Association. President of Jefferson County Medical Society 1939. Orator in Medicine, Kentucky State Medical Association 1940. Vice-President, Kentucky State Medical Association, 1942. Chairman of Procurement and Assignment Commission of Jefferson County Medical Society; Vice-President and Director of Louisville Tuberculosis Association.

This brief sketch of the more important events in the life of Dr. Oscar O. Miller tells only a part of the story of this great teacher, advisor, physician and pioneer in tuberculosis work in Kentucky. Volumes could be written of the work and achievements of this fine spirited, kind hearted, efficient servant of humanity, but Dr. Miller is most widely known, respected and admired because of his achievements in the tuberculosis field.

The early history of the tuberculosis work in Kentucky would make an interesting story but all through its pages, its successes and failures, the efficient service and the fine spirit of Dr. Miller are woven into the records in a way that speaks volumes for him. The development of the Tuberculosis Program was slow and the procedures tedious, but his courage was not found wanting. After serving some four years as Medical Director in Hazelwood, Dr. Miller moved on to a larger service, as Medical Director of Waverly Hills Sanatorium. There he served long and so efficiently that his record needs no comment here.

In 1931 Dr. Miller relinquished his position as Medical Director of Waverly Hills Sanatorium, but continued as Medical Director of Waverly Hills Tuberculosis Clinic and field work. In 1942, he entered into the field of private practice, devoting his time, talents and experience to treating chest conditions, and extending his services through consultation over a large area.

The Kentucky State Medical Association is indeed fortunate to have Dr. Miller at the helm and his leadership in the Tuberculosis Control Program as it develops in the medical future. His wise counsel and great courage will be needed to assist in driving the greatest and most terrible enemy from our State.

THE 1944 ANNUAL MEETING

Each member of the Association is urged to read through carefully the program for the Scientific Meetings. In so doing, he will have opportunity to familiarize himself with the subject matter to be presented and the fine array of talent scheduled to bring up-to-date scientific knowledge to our profession. The Scientific Program Committee, with the assistance of the Regional Committee of the War-time Medical Meetings, has worked conscientiously and hard in selecting the topics and obtaining the speakers. This meeting should go down in the history of the Association as one of its most successful.

Doctor Miller, Chairman of the Committee on Scientific Program, and Doctor Henderson, Chairman of the War-time Meetings Regional Committee, are entitled to our plaudits for their splendid work.

OUR LEXINGTON

Lexington is in the heart of a most picturesque touring country, "The Blue Grass" which takes in not one county or two, but a large section of eastern and central Kentucky. Hundreds of miles of paved roads lead to many places of entrancing scenic beauty, and to spots of historic, romantic and legendary interest. After visiting in Lexington, Ashland, the home of Henry Clay, Clay's tomb, the home of Mary Todd, wife of Abraham Lincoln, scenes of LaFayette's visit to Lexington, and other places of great interest, there are many enjoyable day or less-than-day trips by motorbus or train. Persons visiting the Blue Grass section should not fail to see the highly developed thoroughbred horse-breeding farms, the beautiful country estates of some of the nation's wealthiest men; Dix River hydro-electric dam; the old village of Shakertown, Boonesboro, fort of Daniel Boone; the State Capital at Frankfort, and Boone's burial place on the bluffs overlooking the Kentucky River. Then there are Herrington Lake, one of America's greatest fishing places; High Bridge; Berea, the famous Kentucky mountain school; the palisades of the Kentucky River; Boone Tunnel; and the stately mansions of ante-bellum days.

Many visitors who love good horses are attracted to Lexington each year to the trotting and running races. Lexington has the finest trotting track in the world and offers the largest purses.

Places of Interest: In Lexington and Fayette County are many places of historic and other interest for the physician and his family. In the City of Lexington are Transylvania College and the University of Kentucky. Ashland, the Home of Henry Clay, is on the Richmond Road, just outside the city limits. A few miles out, on the Bryan Station Road, is the Bryan Station Memorial, commemorating the heroic defense by the early pioneers of the fort at that point. Within a radius of a few miles of the City Hall are several of the most famous stock-breeding farms in America. Among these are Faraway Farm, the home of one of the world's most famous race horses, Man o' War, and Idle Hour Farm, owned by Colonel E. R. Bradley, on which has been bred, raised and trained four winners of the Kentucky Derby. Walnut Hall Farm, seven miles out on the Newton Road, is the largest trotting horse breeding establishment in the world. Four miles out on the Versailles Pike is Calumet Farms, owned by Warren Wright, on which have been raised and trained two derby winners. Keeneland Race track is six miles out on the Versailles Pike and the Kentucky Trotting Track is a short distance out on South Broadway. Other places of interest are the United States Public Health Service Hospital; the U. S. Veterans Hospital, outstanding for its occupational therapy in connection with mental and nervous disorders; the Julius Marks Sanatarium; High Oaks Sanatorium; the Good Samaritan Hospital; and St. Joseph's Hospital.

Civic Luncheon Clubs: Lexington has a number of civic luncheon clubs. Among these are the Rotary Club, which meets at noon on Thursdays at the Phoenix Hotel; the Kiwanis Club, which meets at noon on Tuesdays at the Lafayette Hotel; the Optomist Club, meeting at noon on Fridays at the Lafayette Hotel; the Lions Club, meeting at noon on Wednesdays at the Lafayette Hotel; and the Co-Operative Club, meeting Mondays at noon at the Lafayette Hotel. The U.C.T., the Altrusa, and the Pyramid clubs, and the American Legion also have regular dinner and luncheon meetings.

Hotel Reservations: Lexington has ample hotel accommodations for all the physicians and their families; however, it is wise to secure hotel reservations in advance. Write immediately to Dr. Charles C. Garr, Chairman of the Hotels Committee, or to the managers of the hotels for your reservations.

The headquarters of the Association will be at the Phoenix Hotel; headquarters for the Woman's Auxiliary will be at the Lafayette Hotel. The two hotels are only half a block apart. Rooms may be reserved at either, as desired.

Golf at Lexington: Those who enjoy the royal and ancient game of Golf may bring along their clubs and play at the beautiful Lexington Country Club during the meeting. The Country Club is three miles from the city and open to all members of the Association who desire to play. Everything has been arranged for the comfort of those interested and they can play at their own convenience during their stay in Lexington. Many physicians have played this course in the past and know its beauty and what a pleasure it is to play upon it.

Dr. T. J. Overstreet, the Chairman of the Golf Committee, has secured fourteen very carefully selected prizes that will be worth competing for and they will be awarded as follows: low net, low gross, blind bogey, most pars, most birdies, most

Utilities Order U-2
Schedule B
Certification Form

WPBI-2101
7-4-44
R

WAR PRODUCTION BOARD

Washington 25, D. C.

To the Physician or Surgeon:

Utilities Order U-2 places certain limitations on the furnishing of telephone service except where required for the proper discharge of duties related to direct defense, public health, welfare or security. These limitations are made necessary by a serious shortage of telephone facilities which has resulted because of the heavy requirements of the armed services for communications material.

In addition, this Order gives preference in obtaining service in two types of cases where it is properly certified that unreasonable hardship exists. Where telephone service is furnished as a result of such certification it means delaying the furnishing of service to a residential applicant whose application has been pending longer. The two types of cases are:

Case 1

Residence service where the attending physician or surgeon certifies on the Schedule B Certification Form that there exists a condition of serious illness or pregnancy involving serious complications, that he must be called repeatedly at unpredictable intervals for emergency treatment and that in view of all the circumstances telephone service is essential. Such service shall be terminated within 30 days of the termination of the conditions specified above.

Case 2

Residence service required where a person lives alone and the attending physician certifies on the Schedule B Certification Form that such person is confined to residence quarters for a protracted period by reason of serious illness or physical disability and that in view of all the circumstances telephone service is essential. The phrase "lives alone" includes a person who is alone all day or during the day or night working hours, except for one or more children aged 10 years or younger or another person similarly certified to be confined to residence quarters by reason of serious illness or physical disability. Such service shall be terminated within 30 days after the termination of the conditions specified above.

Page 2 of this form is intended for use by the attending physician or surgeon so that the medical facts regarding the cases set forth above can be clearly and conveniently determined. The applicant for telephone service whose name appears on page 2 of this form has stated that he believes that he qualifies for preferential treatment under Case 1_____ Case 2 _____.

War Production Board
GPO--War Board 11922--p. 1

OVER

WAR PRODUCTION BOARD
Utilities Order U-2
Schedule B Certification

The _____ Telephone Company

With reference to application for telephone service made by

_____ (Name of Applicant) _____ (Name of Patient)

_____ (Address of Applicant) _____ (Address of Patient)

1. General nature of present illness or physical disability

2. If Case 1 (see page 1) state whether the serious illness or pregnancy condition requires that the attending physician or surgeon be called repeatedly at unpredictable intervals for emergency treatment. If Case 2 (see page 1) state whether the serious illness or physical disability described above requires confinement of the patient to residence quarters for a protracted period. _____

3. State whether in view of all the circumstances telephone service is essential.

4. Probable date of termination of physical condition set forth above.

I hereby certify to the _____ Telephone Company and to the War Production Board that the information given above is correct and complete to the best of my knowledge and belief and that in view of all the circumstances telephone service is essential.

_____ (Date) _____ (Signature of Attending Physician or Surgeon

Section 35 (A) of the United States Criminal Code, 18 U.S.C. Sec. 80 makes it a criminal offense to make a willfully false statement or representation to any Department or Agency of the United States as to any matter within its jurisdiction.

(This form may be reproduced.)

fours, most fives, low score, longest drive, and high score.

The ladies are cordially invited to participate in the tournament and three prizes will be given to low net, low gross, and high score. The tournament will be played on the handicap basis and it is imperative that those who participate secure their club handicap from their local Pros. Dr. Overstreet urges everyone to play this beautiful course. The physicians will enjoy the tournament as there will be no green fees attached.

EXHIBITS

Those attending the Annual Meeting will have an opportunity to observe a collection of commercial exhibits that will prove of much scientific value and worthwhile entertainment. Remember that the exhibitors pay the Association for the space and are entitled to your visit and consideration of patronage.

All of our doctors are unusually busy and, as a result, scientific exhibits will be limited, but it is hoped that there will be a number of unusual character. Any member desiring to set up an exhibit should write Doctor Charles N. Kavanaugh of Lexington.

ENTERTAINMENT IN LEXINGTON

On Tuesday evening, September 19th the members of the Association and their wives will be guests of the United States Public Health Hospital, Leestown Pike, Lexington, at a dinner. Immediately following the dinner in the auditorium there will be a musical concert, followed by the program of the evening.

There will be a golf tournament at the Lexington Country Club open to all the doctors, their wives and the members of the Auxiliary, and many prizes have been contributed for every type of player. The tournament opens Monday afternoon and continues through Wednesday.

The Ladies Auxiliary will be guests of the Kentucky State Medical Association at a luncheon at the Lafayette Hotel at noon on Tuesday, September 19th, with Dr. E. H. Cary, Past President A. M. A., of Dallas, Texas, as the guest speaker.

The Rotary, Kiwanis and Lions, Optimist and Cooperative Clubs cooperating with the Altrusa, Business and Professional Women's Club cordially invite the members to attend their luncheons and enjoy their programs.

PRESIDENT WHOM WE HONOR



Benjamin Rush Palmer

1813-1865

At the Bardstown meeting of the Kentucky State Medical Association held on April 18-19, 1860, Dr. Benjamin Rush Palmer of Louisville was elected President. Owensboro was selected as the place of meeting for 1861. Widespread search fails to disclose any reference whatever to a meeting of the Association in 1861 and it seems safe to conclude that the 1860 meeting was the last until 1868, when the annual meetings were resumed. Presumably Dr. Palmer held the office of President from 1861 to his death in 1865. Thus he has the distinction of having been President of the Association for a much longer period than anyone else, although he apparently never presided at an annual meeting.

Benjamin Rush Palmer was born at Clarendon, Rutland County, Vermont, on May 13, 1813. He was the son of Dr. David Palmer and Lavinia Bigelow Palmer. He attended Thetford Academy prior to entering Dartmouth College where he received an A. B. degree in 1831. He obtained his masters degree three years later from the same institution.

Even before he had obtained his M. A. degree young Palmer had begun the study of medicine in the office of his father, Dr. David Palmer, who not only had a large general practice but was Professor of Chemistry and Botany in the Vermont Medical College at Woodstock. Benjamin Rush Palmer received his degree in medicine from the Vermont Medical College in 1834, the same year he had won his M. A. Shortly thereafter he began the practice of medicine in Belchertown, Mass., where he remained until 1840 when he removed to Woodstock, Vermont.

In 1841 he was elected Professor of General, Special and Surgical Anatomy and Physiology in the Vermont Medical College at Woodstock. In addition to being eloquent he was eminently practical in his lectures and was said to have been greatly loved and admired by his pupils. At this period in medical education well known teachers were employed at different sessions of the same year at different schools. Dr. Palmer's reputation as a teacher was such that in 1842 he was elected Professor of Anatomy and Physiology in the Berkshire Medical Institution at Pittsfield, Mass., though he maintained his official residence at Woodstock and continued as a teacher in the Vermont Medical College. Still later he lectured for a time at the Buffalo (N. Y.) Medical College. Within ten years Dr. Palmer had obtained a national reputation and in 1853 he was elected to the Chair of Anatomy in the Medical Department of the University of Louisville.

The late Dr. Henry A. Cottell thus eulogizes him:

"Dr. Benjamin Rush Palmer was a man of marvelous natural endowment and great intellectual attainment. He was deeply read in the classics, he knew the French language, and had mastered the literature of his mother tongue, which he spoke with grace, with fluency, and with eloquence. His attainments in science were extraordinary and he had a presence upon the rostrum which riveted the students' attention to the minutest detail of his learned discourses. I have heard one of his students say that he could clothe the dryest bone in the charming vesture of eloquence and poetry. If he was not himself a genius, he was the kind of men from whose families geniuses may spring."

Dr. Palmer continued as Professor of Anatomy in the University of Louisville until 1864 when, upon the death of the Professor of Surgery, Joshua B. Flint, Dr. Palmer was transferred to the vacant Chair. However, his tenure of this Professorship was short being terminated by his death in 1865.

Benjamin Rush Palmer was married to Araminta Dorma Graves, of Brandon, Vermont. Of this union came Edward Rush Palmer who was born November 8, 1842, and who followed his grandfather and father in medicine, graduating from the Medical Department of the University of Louisville in 1864. In 1865 he was made Demonstrator of Anatomy and a year later was elected to the Professorship of Physiology in his alma mater where he continued to teach until his death on July 5, 1895. One of his sons, Edward R. Palmer (1871-1942) whom we knew and admired, was also a graduate of and one time Professor in the University of Louisville. Thus for ninety years the name of Palmer was a familiar one in the records of the Kentucky State Medical Association.

EMMET F. HORINE

PRESIDENT 1944



J. H. PRITCHETT, M. D.*
Louisville

Dr. Pritchett was elected Vice-President at the Louisville meeting of the Kentucky State Medical Association in 1943. He was elected President by the Council on January 28, 1944 to fill the unexpired term of Dr. V. A. Stilley, who died January 20, 1944. Dr. Pritchett will preside at the opening session of the Annual Meeting.

*Biography previously published.

VICE PRESIDENTS



J. Watts Stovall, M. D.

Grayson

Dr. J. Watts Stovall was born in Beckley, W. Va., April 26, 1882 and moved with his parents to Grayson, Kentucky, May 12, 1891. Dr. Stovall's father, Dr. J. Q. Stovall, practiced medicine in West Virginia and continued in this practice when he moved to Kentucky in 1891.

Dr. Stovall attended the common schools in Grayson until he was fifteen years of age and then went to Barbourville, West Virginia. At the age of seventeen he entered the Spanish-American War. He was in the Philippines campaign under General McArthur, the father of the present General Douglas McArthur. He returned home at the age of 19, and entered medical school at the old Kentucky University, Louisville, and was graduated from there June 30, 1905. He returned to Grayson to enter into partnership with his father which continued until the latter's death in 1918.

Dr. Stovall took postgraduate courses in Chicago, Tulane University in New Orleans, and returned from there in 1927 to organize the Stovall Hospital, in Grayson. He is now Chief Surgeon and Superintendent of this hospital. He served 12 years on his local school board, and fifteen years on the City Council. He was County Chairman of the Democratic Party for twenty-five years. He is an Ex-President of the Rotary Club, a Shriner and a Mason and has been a Delegate to two Democratic Conventions. He was appointed to the State Board of Health by Governor W. J. Fields in 1926 and since that time has been an invaluable member of the board. His deep sympathy and warm hand have carried him far in organizing medicine and public health work. His charity and compassion for the under-privileged in the mountain area in which he practices has carried his name into every household of that region.



William H. Fuller, M. D.

Mayfield

Dr. William H. Fuller, son of Dr. Geo. T. Fuller, who was a former member of the State Board of Health, was born October 7, 1896, at Lowes, Kentucky and moved to Mayfield at the age of one year. He attended public schools and high school at Mayfield, graduating in 1916. He entered the University of Cincinnati in the fall of 1916 for his premedical work and was graduated from the Eclectic Medical College of Cincinnati in 1922.

After graduation, he entered the New York Post Graduate Medical School and Hospital, specializing in the eye, ear, nose and throat, and in 1928, together with Dr. James T. Fuller and Dr. Homer A. Gilliam, established the Fuller-Gilliam Hospital and Clinic in Mayfield, Kentucky, and since that time has practiced in that city.

He served as President of the Graves County Medical Association. He was appointed a member of the State Board of Health of Kentucky in 1934 and has served continuously since that time. Dr. Fuller is a veteran of World War I.

SECRETARY-EDITOR



P. E. Blackerby, M. D.

Louisville

Secretary, Kentucky State Medical Association; Editor, Kentucky Medical Journal, and State Commissioner of Health. Chairman, Procurement and Assignment Service for Physicians of Kentucky. Orator in Medicine 1942.

THE TREASURER



A. W. Davis, M. D.*
Madisonville

BUSINESS MANAGER



L. H. South, M. D.
Louisville

Dr. South was graduated from the Woman's Medical College, Philadelphia, and received her laboratory training under Dr. William H. Park, The Rockefeller Institute, Mayo Clinic and the Pasteur Institute, Paris, France. She is a graduate of the School of Public Health, Johns Hopkins, and a member of the National Institute of Social Science, New York.

ADVERTISING MANAGER



J. G. Denhardt
Bowling Green

Mr. J. G. Denhardt is President of the Times Journal Publishing Company and has been publishing the Kentucky Medical Journal for a number of years.

*Biography previously published.

ORATOR IN SURGERY



J. Farra Van Meter, M. D.
Lexington

Dr. Van Meter was born in Lexington, August 29, 1899, his undergraduate work was done at the University of South Carolina.

He received his medical degree from the Medical College of the State of South Carolina in 1925. After completing one year internship at the Good Samaritan Hospital, Lexington, he was awarded a Fellowship in Surgery at the Cleveland Clinic where he served for two years in the service of the late George W. Crile. Following this he was appointed assistant resident surgeon to the General Memorial, New York City, for the study of cancer and allied diseases.

He is attending surgeon to the Good Samaritan and St. Joseph's Hospitals, Lexington, and for the past twelve years has been secretary of the staff of St. Joseph's Hospital. He is director of the cancer clinic, Good Samaritan Hospital, Fellow of the American College of Surgeons, past President of the Fayette County Medical Society, past President of the Lexington Kiwanis Club, past president of the Lexington Community Chest and an Elder in the Presbyterian Church.

ORATOR IN MEDICINE



Frederick G. Speidel, M. D.
Louisville

Frederick George Speidel was born March 14, 1889 in Louisville, son of Dr. Edward and Emma Keisker Speidel. He

was educated in the public schools of Louisville, graduated from the duPont Manual Training School in 1907 and received his M.D. from the University of Louisville Medical School in 1917. Served as Lieutenant in the Medical Corps of the U. S. Navy from May 1917 to October 1919. Has practiced Internal Medicine in Louisville since the latter date and his post graduate work was at the U. S. Naval Medical School, Rockefeller Institute for Medical Research and University of Michigan.

He is a member of Jefferson County Medical Society, State Medical Association, American Medical Association, Southern Medical Association, American Therapeutic Society, Fellow of American College of Physicians and Diplomate of the American Board of Internal Medicine.

He is a member of the staff of the Kentucky Baptist Hospital, St. Anthony's Hospital and Kosair Crippled Children's Hospital.

He has served the University of Louisville in various teaching capacities and is now Associate Clinical Professor of Pharmacology.

OUR NEW COUNCILOR

T. Atchison Frazer. M. D.

Marion

Dr. Frazer has written his biography in such an original style that we are quoting it exactly as received.

"T. Atchison Frazer was born on a cold frosty morning November 12, 1869, and "grew up" in Hopkins County, and has been living ever since, worn out a lot of cheap clothes and ate a lot of good food and had as much fun as the average man. The son of Thomas A. and Mary Lynn Frazer and the second of twelve children, ten of which are living. Was lazy when a boy and that affliction has haunted me all my life. I did just as little work as I could get by with and still do very little work.

I went to country schools (Old Stony Point and Silent Run), had very poor teachers and learned very little. Walked three miles to these schools which helped to develop the physical boy. Went to M. & F. Academy at Providence, learned very little there and tried to teach school one year in Caldwell County, but was a failure. Entered Medical Department of Vanderbilt University in 1892 and graduated March 1894. Learned very little there, barely enough to get by with.

I located at Blackford, Webster County, April 1894, and practiced there until July 1900. Moved to Marion July 1900, where I have been since that time. I married Miss Cleopatra Numm April 1895 and reared a family of seven children, six of whom are boys, all living at Marion and doing better than I am.

I belong to Methodist Church, Masonic Lodge, Crittenden County Medical Society, Kentucky State Medical Association, Four County Medical Society, South West Kentucky Medical Society and American Medical Association. I have a good library, but do not know much that it contains.

I see so much a man should learn, life is so short we can not learn but a small fraction of the things that count in life.

There are a few people who think I am a good doctor and call me when sick. I work a little every day. Do as much as I want to do."

OUR GUEST SPEAKERS



Roger I. Lee, M. D.
Boston

Roger Irving Lee, M. D., was born at Peabody, Massachusetts, on August 12, 1881. He obtained his A. B. degree at Harvard University in 1902, and his M. D. degree at Harvard University in 1905, and has practiced medicine in Boston since that time. He was Visiting Physician, Massachusetts General Hospital, 1912-23. He has held various positions in the Depart-

ment of Medicine at the Harvard Medical School. From 1904-24, he was the Henry K. Bigelow Professor of Hygiene at Harvard University. He is now Fellow of Harvard College. He is a member of the Association of American Physicians, Society Clinical Investigation, member and Regent of the American College of Physicians, member of the American Academy of Arts and Sciences, the American Medical Association and Trustee until elected President-Elect in June 1944, and Past President of the Massachusetts Medical Society. Fellow of the Royal College of Physicians, London, England. Member of the Committee on Medicine, National Research Council.



Donald G. Anderson, M. D.
Boston, Massachusetts

Doctor Anderson received his M. D. degree from Columbia University, New York City and served an internship at the Boston City Hospital followed by a residency in pathology at St. Luke's Hospital, New York City and later was assistant Resident in Medicine at the Presbyterian Hospital. In 1942 he became Resident in Medicine at the Evans Memorial Hospital, Boston, Massachusetts and in 1943 Research Fellow in Medicine at the same institution and Instructor in Medicine at the Boston University School of Medicine. In the past two years he has been engaged in investigative work in infectious diseases in association with Dr. Chester S. Keefer, and is now devoting his entire time to the clinical investigation of penicillin.

Rolla E. Dyer, M. D.
Washington, D. C.

Dr. Rolla E. Dyer is an Assistant Surgeon General of the U. S. Public Health Service, detailed as Director of the National Institute of Health, the research bureau of the Public Health Service. Dr. Dyer obtained his medical training at the University of Texas, receiving his M. D., in 1915. He entered the Public Health Service the next year and after several years spent on various field assignments was detailed to the National Institute of Health and assigned to research on typhus and other rickettsial diseases. He served as Assistant Director, National Institute of Health, from 1922 to 1942 and as Chief of its Infectious Disease Division from 1936 to 1942. In 1942 he was appointed Director of the Institute. Dr. Dyer is a member of the National Research Council, the Committee on Medical Research, the United States of America Typhus Commission, the Governing Council of the American Public Health Association, and is President-elect of the American Society of Tropical Medicine. He is the author of a number of publications dealing particularly with rickettsial diseases. Doctor Dyer has recently received two awards: the National Order of Merit "Carlos J. Finlay" presented by the President of Cuba, and the United States of America Typhus Commission medal, presented by the Secretary of War.



Major Gen. David N. W. Grant, M. D.
Washington, D. C.

Major General David N. W. Grant, the Air Surgeon, is a member of the Air Staff of the Commanding General, Army Air Forces, and as such is charged with the responsibility of planning and directing the operation and supply of all Army Air Forces medical services and facilities, the aero medical research program, air evacuation of the sick, injured and wounded, the convalescent training and rehabilitation program, the preparation of a history of military aviation medicine. Born in Richmond, Va., on May 14, 1891, General Grant received his degree as a Doctor of Medicine at the University of Virginia in 1915. He entered active duty as a Medical Reserve Corps Officer in 1916, and in the following year was appointed First Lieutenant in the Regular Army. During World War I he served in Panama, and for a short time in stations in the United States. He was promoted to Captain and Major in 1918, and in 1919 took command of the Sanitary Train which joined the Army of

Occupation in Germany. After tours of duty at various medical stations following the war, he attended the School of Aviation Medicine in 1931 and was stationed at Randolph Field, Texas, for the subsequent five years. Following attendance at the Air Forces Tactical School, Maxwell Field, Ala., and the Chemical Warfare School, Edgewood Arsenal, Md., he was then appointed Chief of the Medical Division Office, Chief of the Air Corps in 1939, and in 1941 was promoted to Colonel. Under reorganization of the Army of the United States, he was appointed Air Surgeon, Headquarters, Army Air Forces. He was promoted to Brigadier General in 1942 and to Major General in 1943. In 1940 General Grant went to England as Medical Military Air Observer, and since that time has made inspection trips in all theaters of operations in World War II.



Brigadier Gen. James Stevens Simmons
U. S. Army Chief,
Preventive Medicine Service Office
of The Surgeon General U. S. Army

Brigadier General James Stevens Simmons is known principally for his research and teaching in bacteriology, tropical and preventive medicine. He has conducted extensive laboratory and field investigations on malaria, dengue fever, meningitis, typhoid, encephalitis and other diseases, and has taught for many years in the Army Medical School.

A graduate of Davidson College in 1911, and the University of Pennsylvania School of Medicine in 1915, General Simmons received his Doctor of Philosophy degree from the George Washington School of Medicine in 1934 and his Doctorate in public health in 1939 from Harvard University. In 1937 Davidson College awarded him an honorary degree of Doctor of Science, and in 1943 he received similar honorary degrees from Duke University and the University of Pennsylvania.

On October 12, 1943, the American Public Health Association awarded to General Simmons its "1943 Sedgewick Memorial Medal for Distinguished Service in Public Health." More recently he has been awarded the Carlos J. Finlay National Order of Merit by President Batista of Cuba, and the USA Typhus Commission Medal by the Secretary of War.



Colonel B. N. Carter, M. D.
Assistant Director Surgery Division
Washington

Colonel Carter received his B. A. and M. D. degrees from the University of Virginia, Ph. D. from University of Cincinnati. Later he became assistant Resident Surgeon at Johns Hopkins University and Resident Surgeon Cincinnati General Hospital and Associate Professor of Surgery, University of Cincinnati. He is a member of many surgical societies here and abroad.



Alphonse McMahon, M. D.
Captain, M. C., U. S. N. R.
U. S. Naval Hospital
Bethesda, Maryland

Captain McMahon is Chief of Medicine, U. S. Naval Hospital, Bethesda, Maryland. His civilian positions were Senior Instructor in Medicine, St. Louis University School of Medicine; a past vice-president of the American Medical Association; past president St. Louis Medical Society; past president American Therapeutic Society; past Councilor of Missouri Southern Medical Association.



BRIG. GEN. HUGH JACKSON MORGAN, M. D.
Washington, D. C.

General Morgan is a native of Nashville, Tennessee and received his preliminary education at Vanderbilt University and was graduated from the Johns Hopkins University and received his post graduate training at Johns Hopkins University Hospital, Rockefeller Institute and the Rockefeller Foundation Traveling Fellow (Medicine) in Europe. In 1935 he became Physician-in-chief and Professor of Medicine of Vanderbilt University Medical School.

In World War I he was a member of the base hospital 78, a Johns Hopkins University affiliated unit. In 1940 he organized and became director of the 300th General Hospital as affiliated unit of Vanderbilt University Hospital. In February 1942 he was called to active duty as chief consultant in Medicine to the Medical Department of the U. S. Army which assignment he now holds.



JOHN A. TOOMEY, M. D.
Cleveland, Ohio

Dr. Toomey was graduated from the law school of Baldwin Wallace University in 1913 but soon changed his allegiance to medicine and received his M. D. degree from Western Reserve University Medical School and interned in the Cleveland City Hospital, and was physician in charge of the Division of Contagious Diseases. This is one of the outstanding hospitals for contagious diseases in the world. Many Latin Americans, Mexicans and Cubans come to this hospital to study and observe the treatment and care of patients ill with contagious diseases, particularly infantile paralysis. He is Professor of Clinical Pediatrics and Contagious Diseases of his Alma Mater. Dr. Toomey was the first one in this country to point out that the portal of entry of the virus of infantile paralysis is by the way of the gastrointestinal tract. When he first did this, he was ridiculed and bitterly opposed, but in spite of all this he worked steadily to prove his theory until finally the entire country took it up. He is greatly loved by his students and is known as their friend and adviser and affectionately called "Chief" by all of them.



E. D. STROUD, M. D.
Philadelphia

Dr. William D. Stroud was a graduate of the University of Pennsylvania Medical School, Class 1916, interned at the Pennsylvania Hospital in Philadelphia. He was First Lieutenant U. S. Medical Corps in World War I. He worked for a year with Sir Thomas Lewis in London and Sir James Mackenzie in Scotland.

Past President and at present a member of the Board of Directors of The American Heart Association. He is a fellow and Treasurer of the American College of Physicians, member of the Board of Regents and of the Executive Committee Licentiate of the National Board of Medical Examiners and certified by the American Board of Internal Medicine, with special qualification in Cardiovascular Diseases and Chairman of the Section on the Practice of Medicine.

He is a member of the National Advisory Committee on Gerontology of the National Institute of Health, Secretary of the Subcommittee on Cardiovascular Diseases of the National Research Council, member of the Committee on Drugs and Medical Supplies and Chairman of the Subcommittee on Medical Food Requirements of the National Research Council, Board of Directors of the Philadelphia Health Council and Tuberculosis Association, Philadelphia Heart Association, Pennsylvania Heart Association. Cardi-

ologist to the Pennsylvania Hospital, Professor of Cardiology of the University of Pennsylvania, Graduate School of Medicine. Consulting Cardiologist to the many Philadelphia Hospitals.



THOMAS H. STERNBERG, M. D.
Lieut. Colonel, Medical Corps
Director Venereal Disease Control
Washington, D. C.

Col. Sternberg was graduated Northwestern University Medical School, received his internship at Los Angeles County Hospital and Passavent Memorial Hospital in Chicago and a Fellowship in Dermatology and Syphilology, University Pennsylvania Graduate School of Medicine and concurrently Instructor Dermatology and Syphilology, University Pennsylvania Medical School 1934 to 1937. He was in private practice Dermatology and Syphilology until entrance into the Army April 1942. Present assignment is Director, Venereal Disease Control Division, Preventive Medicine Service, Office of The Surgeon General. He is Fellow of the American Medical Association, Fellow of American Academy Dermatology and Syphilology, Fellow of Society for Investigative Dermatology, Diplomate American Board Dermatology and Syphilology.



BRIGADIER GENERAL FRED W. RANKIN
Surgeon General's Office
War Department
Washington, D. C.

Brigadier General Rankin's biography appeared in September 1943 issue of the Journal. At present he is Chief Consultant Surgeon of the U. S. Army.



E. H. CARY, M. D.
Dallas, Texas

Dr. Cary is the former President of the American Medical Association and received his medical education at Bellevue Hospital Medical College, New York City, and his LL.D at Baylor University. He interned at Bellevue Hospital and New York Eye and Ear Infirmary. He was professor of Ophthalmology and Otolaryngology and head of the department at Baylor University and was dean of the medical school from 1902 to 1922, head of the Cary Clinic, and has been president of his county and state medical societies and past president of the Southern Medical Association and American Academy of Ophthalmology and Otolaryngology, and is a member of many national and international societies. He is the representative of the National Physicians Committee.



FREDERICK H. FALLS, M. D.
Chicago, Ill.

Dr. Frederick H. Falls is a graduate of Rush Medical College, and was engaged in research at the University of Illinois for five years. He served in the Medical Corps of the Army in the first World War. He was associated with Dr. DeLee at Lying-In Hospital from 1919-21. Professor of Obstetrics and Gynecology, University of Iowa from 1921-26, returned to Chicago to accept the Professorship of the Department of Obstetrics and Gynecology, University of Illinois in 1926 to the present time. He is a member of the Cook County Hospital, Grant Hospital and Research and Educational Hospital Staffs.



Colonel John Barlow Youmans, M. D.
Washington, D. C.

Dr. Youmans received his A. B. and M. S. from the University of Wisconsin and his M. D. degree from Johns Hopkins University School of Medicine. In 1919 he was appointed Director of Wisconsin State Cooperative Laboratory of Hygiene. He served an internship in the Milwaukee Children's Hospital. In 1919 he was appointed medical house officer Massachusetts General Hospital, 1920 became assistant professor of medicine and in 1929 associate professor Vanderbilt University School of Medicine.

In 1940 he served as member of the Rockefeller Foundation Health Committee to Europe. He is now a Colonel in the Medical Corps, Director, Nutrition Division, Preventive Medicine Service, Surgeon General's Office.



Maurice Levine, M. D.
Cincinnati, Ohio

Dr. Levine received his B. A. and M. A. from the University of Cincinnati and M. D. Johns Hopkins University. His hospital training was received at Twillingate, Newfoundland, Assistant Resident Psychiatry, Phipps Psychiatric Clinic, internal medicine Johns Hopkins Hospital. Neurology and Psychology, Vienna, 1928. He is at present associate professor of Psychiatry, University of Cincinnati, training psychoanalyst, Chicago Institute for Psychoanalysis. He is a member of many national and international societies of Psychiatry. He has recently published a book "Psychotherapy in Medical Practice" and is a contributor to various medical journals on psychiatry, physiology and psychosomatic medicine.



Ralph Pemberton, M. D.
Philadelphia

Dr. Ralph Pemberton, 2031 Locust St., Philadelphia received his B. S., M. S., and M. D. degrees from the University of Pennsylvania and later had post graduate study in Berlin and Strasburg. He was appointed professor of Medicine, Graduate School of Medicine University of Pennsylvania. He served as Major in Medical Corps First world war in charge of the intensive study and treatment of arthritis and is now national consultant in rheumatism and arthritis under the program of War-Time Graduate Medical Meetings. He is a member of numerous societies here and abroad on the control of Rheumatic Diseases and was awarded the meritorius Service medal of the Commonwealth of Pennsylvania January 13, 1939.

Colonel A. J. Lanza, M. D.
Washington, D. C.

Dr. A. J. Lanza was born in New York City in March 1884; educated in Washington schools; attended George Washington University and graduated with a degree of M. D. in 1906. A resident physician in the Eastern Dispensary and Casualty Hospital until entering the U. S. Public Health Service as Assistant Surgeon in 1907. Two Alaska cruises were made with the Coast Guard. After a course in the Hygienic Laboratory in Washington was detailed as Chief Surgeon at the U. S. Bureau of Mines in 1914 and continued in that capacity until 1918, making numerous investigations of occupational disease on miners, mostly in the Rocky Mountain country. In 1917 was detailed as Officer in Charge of the Office of Occupational Diseases in the Public Health Service with headquarters in Washinigton and occupied this position until resigning from the Public Health Service on the first of January, 1920.

From April, 1924 through 1925 served as Executive Secretary of the National Health Council in New York City.

In March 1942 was appointed Director Occupational Health Division Preventive Service, office of the Surgeon General War Department.

:—: COUNCILORS 1944 :—:

First District



T. Atchinson Frazer
Marion

Second District



E. L. Gates
Greenville

Third District



C. C. Howard
Glasgow

Fourth District



J. I. Greenwell
New Haven

Tenth District



C. A. Vance, Chairman
Lexington

Fifth District



J. B. Lukins
Louisville

Sixth District



Maj. B. W. Atkinson
Campbellsville

Seventh District



Virgil G. Kinnaird
Lancaster

Eighth District



J. M. Blades
Butler

Ninth District



Proctor Sparks
Ashland

Eleventh District



H. K. Buttermore
Liggett

Biographies of the Councilors have been previously published.

OFFICIAL ANNOUNCEMENTS
PROGRAM

The Ninety-Fourth Annual Meeting
of the
Kentucky State Medical Association
The Benjamin Rush Palmer Memorial
Phoenix Hotel - Ball Room
Lexington

September 18, 19, 20, 1944

Tuesday, September 19
9:00 A. M.

Call to Order by the President
.....James H. Pritchett
Louisville

Invocation.....Rev. Robert Miles
Pastor, First Presbyterian Church
Lexington

Greetings.....Samuel B. Marks
Lexington

Installation of President, O. O. Miller

Report of Committee on Arrangements
.....Elmer S. Maxwell, Chairman
Lexington

First Scientific Session
Tuesday, September 19
9:30 A. M.

1. Chemotherapeutics in Pediatrics
.....John A. Toomey
Cleveland
2. Chemotherapy (Penicillin)
(a) Civilian Medical Essayist
.....Donald G. Anderson
Boston
(b) Symposium (Military Essayists)
Medical Aspects
.....Brig. Gen. Hugh Morgan
Washington, D. C.
Surgical Aspects....Col. B. N. Carter
Washington, D. C.
Venereal Disease Treatment
.....Lt. Col. Thomas Sternberg
Washington, D. C.

Special Order
Tuesday, September 19
12:00 M
Oration In Medicine

Conservatism and Liberalism in Medicine
.....Frederick G. Speidel
Louisville

Second Scientific Session
Tuesday, September 19
2:00 P. M.

3. Psychosomatic Medicine
.....Maurice Levine
Cincinnati
4. Present Status of Industrial Medicine
.....Colonel Anthony Lanza
Washington, D. C.
5. Current Problems in Aviation
Medicine
...Major General David N. W. Grant
Washington, D. C.
6. The Present Status of Pain Relief
in Labor.....Frederick H. Falls
Chicago
7. Cardiovascular Diseases
.....William D. Stroud
Philadelphia

Annual Dinner
Tuesday, September 19
6:00 P. M.
United States Public Health Service
Hospital
Leestown Pike

Public Session
8:00 P. M.
Auditorium, United States Public
Health Service Hospital

President's Address: Some Aspects of the Tuberculosis Problem-Oscar O. Miller
Louisville

Accelerated Medicine Today and
Tomorrow.....Roger I. Lee
Boston
President-Elect Americal Medical
Association

The Medical Profession and Federal
Legislation
.....Edward Henry Cary
Dallas, Texas
Representative of National Physicians
Committee

Third Scientific Session
Wednesday, September 20
9:00 A. M.

1. Symposium on Tropical Diseases
(a) Epidemiology.....R. E. Dyer
Asst. Surgeon General, U. S. P. H. S.
Washington, D. C.
(b) Medical Aspects of Tropical
Diseases
.....Captain Alphonse McMahon
Bethesda, Maryland
(c) The New Weapons of Control of
Insect-Borne Diseases
Brig. Gen. Jas. S. Simmons
Washington, D. C.
2. The Surgical Aspects of the Chronic
Dyspepsias.....Irvin Abell
Louisville

SPECIAL ORDER
WEDNESDAY, SEPTEMBER 20
12:00 M.
ORATION IN SURGERY

Penicillin, An Early Evaluation in Surgical Complications....J. Farra Van Meter
Lexington

FOURTH SCIENTIFIC SESSION
WEDNESDAY, SEPTEMBER 20
2:00 P. M.

3. Arthritis.....Ralph Pemberton
Philadelphia
4. Medical Service in a Theater of War
.....Brig. Gen. Fred W. Rankin
Washington, D. C.
5. Nutrition, Its Relation to Deficiency Diseases....Colonel John D. Youmans
Washington, D. C.

PROGRAM OF HOUSE OF DELEGATES

MONDAY, SEPTEMBER 18
PHOENIX HOTEL - FIRESIDE ROOM
FIRST SESSION, 10:00 A. M.

Call to Order by the President
.....James H. Pritchett
Louisville
Report of Committee on Credentials
.....H. V. Johnson, Chairman
Georgetown
Roll Call by Secretary
Minutes of the 1943 Meeting
Report of Committee on Scientific Work
.....O. O. Miller, Chairman
Louisville
Report on Arrangements
.....Charles D. Cawood, Chairman
Lexington
President's Report
Report of Council
Treasurer's Report
Secretary's Report
Report of Councilors by Districts
Report of Delegates by Counties
Report of Delegates to A. M. A.
Report of the Medico-Legal Committee
.....J. B. Lukins, Chairman
Louisville
Report of Committee on Procurement and Assignment Service
.....P. E. Blackerby, Chairman
Louisville
Report of Committee on Postgraduate Course...W. W. Nicholson, Chairman
Louisville
Report of Committee on Medical Economics.....C. C. Howard, Chairman
Glasgow
Report of Committee on Hospital Standardization
.....W. L. Tyler, Chairman
Owensboro
Report of Committee on Auditing
.....George F. Doyle, Chairman
Winchester
Report of Committee on Report of Council
.....John H. Blackburn, Chairman
Bowling Green
New Business

MONDAY, SEPTEMBER 18
SECOND SESSION, 2 P. M.

Roll Call
Minutes of Previous Session
Report of Committee on Publicity
.....Charles D. Cawood, Chairman
Lexington
Report of Committee on Technical Exhibits.....J. B. Lukins, Chairman
Louisville
Report of Committee on Public Health Problems in War
.....Hugh R. Leavell, Chairman
Louisville
Report of Committee on Scientific Exhibits
....Charles N. Kavanaugh, Chairman
Lexington
Report of Committee on Medical Education
.....Marion F. Beard, Chairman
Louisville
Report of Committee on Diseases of the Heart..Emmet F. Horine, Chairman
Louisville
Report of Committee on Medical Ethics
.....Guy Aud, Chairman
Louisville
Report of Advisory Committee to the Director of Hospitals and Mental Hygiene.....W. E. Gardner, Chairman
Louisville
Report of Committee on Crippled Children.....W. Barnett Owen, Chairman
Louisville
Report of Committee on Tuberculosis
.....Paul A. Turner, Chairman
Louisville
Report of Committee on Control of Cancer
.....Wallace Frank, Chairman
Louisville
Report of Committee on the Journal
.....J. W. Stovall, Chairman
Grayson
Report of Obstetric Advisory Committee
.....Alice N. Pickett, Chairman
Louisville
Report of Pediatric Advisory Committee
.....James H. Pritchett, Chairman
Louisville

Report of Syphilis Control Advisory Committee
.....W. U. Rutledge, Chairman
Louisville
Report of Committee on Periodic Health Examination..W. E. Doyle, Chairman
Louisville
Report of Committee on Public Relations
.....Irvin Abell, Chairman
Louisville
Report of Committee on Woman's Auxiliary
....Mrs. Octavus Dulaney, Chairman
Louisville
Report of Committee on Industrial Health
.....C. W. Dowden, Jr., Chairman
Louisville
Report of Committee on McDowell Memorial.....Irvin Abell, Chairman
Louisville
Report of Committee on Miscellaneous Business..M. H. Pulskamp, Chairman
Louisville
Report of Committee on Resolutions
.....H. G. Reynolds, Chairman
Paducah
New Business

WEDNESDAY, SEPTEMBER 20
THIRD SESSION, 8 A. M.

Roll Call
Final Report of Committee on Credentials
Election of Officers
Selection of Place of Meeting
Appointment of Permanent Committees
Unfinished Business
Final Adjournment

PROGRAM

TWENTY-SECOND ANNUAL MEETING
of the
WOMAN'S AUXILIARY
to the
KENTUCKY STATE MEDICAL ASSOCIATION
LAFAYETTE HOTEL - RED ROOM
SEPTEMBER 18, 19, 20, 1944

MONDAY, SEPTEMBER 18
9:00 A. M. - 4:00 P. M.

Registration: Lafayette Hotel Lobby
Mrs. E. L. Dawson, Chairman, Fort Thomas; Miss Emily Stoecker, Louisville; Mrs. W. M. Brown, Lexington; Mrs. Sam Marks, Lexington and Mrs. Ernest B. Bradley, Lexington

Monday, September 18
PHOENIX HOTEL - FIRESIDE ROOM
10:00 A. M.

President's Report to House of Delegates
.....Mrs. Octavus Dulaney
Louisville

TUESDAY, SEPTEMBER 19
PHOENIX HOTEL - BALL ROOM
9:00 A. M.

Joint meeting with the Kentucky State Medical Association. Installation of President of the Kentucky State Medical Association

GENERAL MEETING - OPENING SESSION
LAFAYETTE HOTEL - RED ROOM
TUESDAY, SEPTEMBER 19
9:30 A. M.

Presiding Officer..Mrs. Octavus Dulaney
Louisville
Invocation.....Mrs. C. A. Fish
Frankfort
Roll Call.....Mrs. Joseph E. Weir
Louisville
Address of Welcome
.....Mrs. Farra Van Meter
Lexington
Response.....Mrs. E. L. Henderson
Louisville
Memorial Tribute to Dr. Van A. Stilley
.....Mrs. Stephen C. McCoy
Louisville
In Memoriam.....Mrs. Octavus Dulaney
Louisville
Minutes of the Twenty-First Annual Meeting.....Mrs. Joseph E. Weir
Louisville
President's Report..Mrs. Octavus Dulaney
Louisville
Message from Advisory Council
Report of Committees:
Arrangements
.....Mrs. J. Farra Van Meter
Lexington
Registration and Credentials
.....Mrs. E. L. Dawson
Fort Thomas
Reports:
Delegate, Woman's Auxiliary to American Medical Association
.....Mrs. Richard Hudson
Louisville
Councilor, Woman's Auxiliary to Southern Medical Association
.....Mrs. Philip E. Blackerby
Louisville
Reports:
Officers, Committee Chairmen, County Presidents
Unfinished Business

TUESDAY, SEPTEMBER 19
LAFAYETTE HOTEL - WHITE AND GOLD ROOM
12:00 M

Luncheon, Guests of the Kentucky State Medical Association
Presiding Officer..Mrs. Octavus Dulaney
Louisville

Invocation.....Mrs. Philip E. Blackerby
Louisville
Message: President Kentucky State Medical Association.....Dr. Oscar Miller
Louisville
Greetings: President Woman's Auxiliary to American Medical Association
.....Mrs. David W. Thomas
Lock Haven, Pennsylvania
Greetings: President Woman's Auxiliary to Southern Medical Association
.....Mrs. John Pierpont Helmick
Fairmont, West Virginia
Address: The Auxiliary and Federal Legislation..Dr. Edward Henry Cary
Dallas, Texas
Representative of National Physicians Committee

GENERAL MEETING - SECOND SESSION
TUESDAY, SEPTEMBER 19
2:30 P. M.
LAFAYETTE HOTEL - RED ROOM

Presiding Officer..Mrs. Octavus Dulaney
Louisville
Invocation.....Mrs. Van A. Stilley
Benton
Report of Committee on Resolutions
.....Mrs. John M. Blades
Butler
Report of Committee on Courtesy Resolutions.....Mrs. Shelby Carr
Richmond
Final Report of Credentials Committee
.....Mrs. E. L. Dawson
Fort Thomas
Election of Officers
Installation of Officers
.....Mrs. J. H. Rutledge
Richmond
President's Address
.....Mrs. Eleanor Hume Offutt
Frankfort

TUESDAY, SEPTEMBER 19
6:00 P. M.

Dinner, Guests of the U. S. Public Health Service Hospital
Leestown Pike

WEDNESDAY, SEPTEMBER 20
LAFAYETTE HOTEL - RED ROOM
10:00 A. M.

Post Convention Board Meeting
Presiding Officer
.....Mrs. Eleanor Hume Offutt
Frankfort

EXHIBITS

The Technical and Scientific Exhibits are on the Mezzanine floor and will be open from Monday 1 P. M. to Wednesday 4 P. M.

COMMITTEES FOR LEXINGTON MEETING

CHARLES D. CAWOOD, Gen. Chairman

ARRANGEMENTS COMMITTEE:
Elmer S. Maxwell, Chairman
Ernest B. Bradley
B. F. Robinson
Carey C. Barrett
Donald B. Harding
John W. Scott

RECEPTION COMMITTEE:
J. Farra Van Meter, Chairman
Ballard F. Combs
Allen E. Grimes
George H. Wilson
John L. Keyes
W. S. Wyatt

FINANCE COMMITTEE:
Samuel B. Marks, Chairman
Douglas E. Scott
E. Carroll Yates
Edward J. Murray

ENTERTAINMENT COMMITTEE:
W. D. Reddish, Chairman
John B. Floyd, Jr.
Francis M. Massie
Charles M. McKinlay
J. D. Reichard
Oliver P. Miller
Walter Frey
Thomas M. Marks
M. E. Johnson
Charles G. Baker

HOTELS COMMITTEE:
Charles C. Garr, Chairman
Charles N. Kavanaugh
Arthur Bach

GOLF COMMITTEE:
T. J. Overstreet, Chairman
Harry G. Herring
G. Bedford Brown
W. T. Briggs

WOMEN PHYSICIANS' COMMITTEE:
Emily Warfield. Chairman
Josephine D. Hunt
Caroline P. Scott
Gladys Smithwick
Edythe A. Bacon
Orcena F. Knepper

SCIENTIFIC EXHIBITS:
Chas. Kavanaugh, Chairman
Lexington
Harry M. Weeter, Louisville
Gordon Buttorff, Louisville

WOMAN'S AUXILIARY COMMITTEE:
Mrs. J. Farra Van Meter, Chairman
Mrs. W. M. Brown, Co-Chairman

TECHNICAL EXHIBITORS

A. S. Aloe Company, St. Louis, Missouri, Space No. 2.

Bilhuber-Knoll Corporation, Orange, New Jersey, Space No. 10.

Borden Company, New York, New York, Space No. 8.

Camel Cigarettes, New York, New York, Space No. 4.

The Coca-Cola Company, Atlanta Georgia, Space No. 19.

The Kelley-Koett Mfg. Co., Covington, Kentucky, Space No. 14.

Lederle Laboratories, Inc., New York, New York, Space No. 13.

Eli Lilly and Company, Indianapolis, Indiana, Space No. 18.

J. A. Majors Company, New Orleans, Louisiana, Space No. 11.

Massey Surgical Supply, Inc., Nashville, Tennessee, Space No. 7.

Mead Johnson & Company, Evansville, Indiana, Space No. 1.

Medical Protective Company, Fort Wayne, Indiana, Space No. 15.

Philip Morris & Company, New York, New York, Space No. 6.

The C. V. Mosby Company, St. Louis, Missouri, Space No. 3.

V. Mueller & Co., Chicago, Illinois, Space No. 20.

Sharp & Dohme, Inc., Philadelphia, Pennsylvania, Space No. 12.

Singer Sewing Machine Company, Cincinnati, Ohio, Space No. 9.

Theodore Tafel, Louisville, Kentucky, Space No. 5.

White Laboratories, Inc., Newark, New Jersey, Space No. 16.

The Max Wocher & Son Co., Cincinnati, Ohio, Space No. 17.

Wyeth Incorporated, Philadelphia, Pennsylvania, Space No. 21 & 22.

OFFICIAL CALL

The Kentucky State Medical Association

To Be Held In The Phoenix Hotel

Lexington

To the officers and members of the Component County Societies of the Kentucky State Medical Association:

The Benjamin Rush Palmer Memorial Meeting of the Kentucky State Medical Association will convene in the Ball Room, Phoenix Hotel, Lexington, Monday, Tuesday and Wednesday, September 18, 19, 20, 1944.

The House of Delegates

The House of Delegates will convene in the Fireside Room, Phoenix Hotel at 10 A. M. and 7:30 P. M., Monday, September 18, 1944.

The Council

The Council will convene in the Ball Room of the Phoenix Hotel immediately after the adjournment of the Scientific Session, Wednesday, September 20.

The First Session

The First General Session which constitutes the opening exercises of the scientific function of the Association will be held in the Ball Room of the Phoenix Hotel, September 19, at 9 A. M.

Registration

The Registration Department will be open on the Mezzanine, Phoenix Hotel, from 10:00 A. M. to 5:00 P. M. on Monday, September 18, from 8:30 A.M. to 5:00 P. M. Tuesday, September 19, and Wednesday, September 20, from 8:30 to 12 Noon.

The Woman's Auxiliary

The Woman's Auxiliary will hold all of the meetings at the Lafayette Hotel.

Registration from 12 noon until 4 P. M., Monday, September 18, Mezzanine, Lafayette Hotel.

Regular Session Tuesday, 9:30 A.M., Ball Room, Lafayette Hotel. Post Convention Board Meeting, Wednesday 10 A. M., Lafayette Hotel, Red Room.

COUNCILOR DISTRICTS

FIRST DISTRICT

T. A. Frazer, Marion, Councilor

Ballard	Fulton	Lyon
Caldwell	Graves	McCracken
Calloway	Hickman	Marshall
Carlisle	Livingston	Trigg
Crittenden		

SECOND DISTRICT

E. L. Gates, Greenville, Councilor

Daviess	Hopkins	Ohio
Hancock	McLean	Union
Henderson	Muhlenberg	Webster

THIRD DISTRICT

C. C. Howard, Glasgow, Councilor

Allen	Cumberland	Simpson
Barren	Logan	Todd
Butler	Metcalfe	Warren-Edmonson
Christian	Monroe	

FOURTH DISTRICT

J. I. Greenwell, New Haven, Councilor

Breckinridge	Hardin	Meade
Bullitt	Hart	Nelson
Grayson	Larue	Spencer

FIFTH DISTRICT

J. B. Lukins, Louisville, Councilor

Carroll	Henry	Owen
Franklin	Jefferson	Shelby
Gallatin	Oldham	Trimble

SIXTH DISTRICT

W. B. Atkinson, Campbellsville, Councilor

Adair	Green	Taylor
Anderson	Marion	Washington
Boyle	Mercer	

SEVENTH DISTRICT

V. G. Kinnaird, Lancaster, Councilor

Casey	Lincoln	Rockcastle
Clinton	McCreary	Russell
Garrard	Pulaski	Wayne

EIGHTH DISTRICT

J. M. Blades, Butler, Councilor

Boone	Fleming	Mason
Bracken-Pendleton	Grant	Nicholas
Campbell-Kenton	Harrison	Robertson

NINTH DISTRICT

Proctor Sparks, Ashland, Councilor

Boyd	Grecnup	Magoffin
Carter	Johnson	Martin
Elliott	Lawrence	Pike
Floyd	Lewis	

TENTH DISTRICT

O. A. Vance, Lexington, Councilor

Bath	Jessamine	Owsley
Bourbon	Lee	Powell
Breathitt	Madison	Rowan
Clark	Menifee	Scott
Estill	Montgomery	Wolfo
Fayette	Morgan	Woodford

ELEVENTH DISTRICT

H. K. Buttermore, Liggett, Councilor

Bell	Knox	Letcher
Clay	Knott	Perry
Harlan	Laurel	Whitley
Jackson	Leslie	

CONSTITUTION AND BY LAWS OF THE KENTUCKY STATE MEDICAL ASSOCIATION ADOPTED AT PADUCAH IN 1902 AS AMENDED

CONSTITUTION

Article I. Name of the Association

The name and title of this organization shall be the Kentucky State Medical Association.

Article II. Purpose of the Association

The purpose of the Association shall be to federate and bring into compact organization the entire medical profession of the State of Kentucky and to unite with similar associations in other states to form the American Medical Association, with a view to the extension of medical knowledge, and to the advancement of medical science, to the elevation of the standard of medical education and to the enactment and enforcement of just medical laws; to the promotion of friendly intercourse among physicians, and to the guarding and fostering of their material interest and to the enlightenment and direction of public opinion in regard to the great problem of state medicine, so that the profession shall become more capable and honorable within itself and more useful to the public in the prevention and cure of disease and in prolonging and adding comfort to life.

Article III. Component Societies

Component societies shall consist of those county medical societies which hold charters from this Association.

Article IV. Composition of the Association

Section 1. This Association shall consist of Members, Delegates and Guests.

Section 2. Members. The members of this Association shall be the members of the component county medical societies.

Section 3. Delegates. Delegates shall be those members who are elected in accordance with this Constitution and By-laws to represent their respective component county societies in the House of Delegates of this Association.

Section 4. Guests. Any distinguished physician not a resident of this State may become a guest during any Annual Session upon invitation of the Association or its Council, and shall be accorded the privilege of participating in all of the scientific work of that session.

Article V. House of Delegates

The House of Delegates shall be the legislative and business body of the Association, and shall consist of (1) Delegates elected by the component county societies, (2) *ex-officio*, the officers of the association as defined in Article VIII, Section 1, of this Constitution and (3) the five immediate past presidents.

Article VI. Sections and District Societies

The House of Delegates may provide for a division of the scientific work of the Association into appropriate Sections and for the organization of such Councilor District Societies as will promote the best interest of the profession, such societies to be composed exclusively of members of component county societies.

Article VII. Sessions and Meetings

Section 1. The Association shall hold an Annual Session, during which there shall be held daily not less than two General Meetings, which shall be open to all registered members, delegates and guests.

Section 2. The time and place for holding each annual session shall be fixed by the House of Delegates.

Article VIII. Officers

Section 1. The officers of this Association shall be a President, President-Elect, three Vice-Presidents, a Secretary, a Treasurer, and eleven Councilors.

Section 2. The President-Elect and the Vice Presidents shall be elected for a term of one year. The Secretary, Treasurer and Councilors shall be elected for terms of five years each; the Councilors being divided into classes so that two shall be elected each year except for each fifth year when three shall be elected. All these officers shall serve until their successors have been elected and installed.

Section 3. The officers of the Association shall be elected by the House of Delegates on the last day of the Annual Ses-

sion but no Delegates shall be eligible to any office named in the preceding section, except that of Councilor and no person shall be elected to any such office who is not in attendance upon the Annual Session, and who has not been a member of the Association for the past two years.

ARTICLE IX. FUNDS AND EXPENSES

Funds for meeting the expenses of the Association shall be arranged for by the House of Delegates by an equal per capita assessment upon each county society to be fixed by the House of Delegates, by voluntary contribution, and from the profits of its publication. Funds may be appropriated by the House of Delegates to defray the expenses of the Annual Session, for publication and for such other purposes as will promote the welfare of the Association and profession.

ARTICLE X. REFERENDUM

The General Meeting of the Association may, by a two-thirds vote, order a general referendum upon any question pending before the House of Delegates, and the House of Delegates may, by a similar vote of its own members, or after a like vote of the General Meeting, submit any such question to the membership of the Association for a final vote; and if the persons voting shall comprise a majority of all the members, a majority of such vote shall determine the question and be binding upon the House of Delegates.

ARTICLE XI. THE SEAL

The Association shall have a common Seal with power to break, change or renew the same at pleasure.

ARTICLE XII. AMENDMENTS

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the delegates registered at that Annual Session, provided that such amendment shall have been presented in open meeting at the Previous Annual Session, and that it shall have been sent officially to each component county society at least two months before the session at which final action is to be taken.

BY-LAWS

CHAPTER 1. MEMBERSHIP

Section 1. The General Meeting shall include all registered members, honorary members and guests who shall have equal right to participate in the scientific proceedings and discussions. PROVIDED, that no physician may become a member of any county society unless he signs and keeps inviolate the following pledge:

I hereby promise upon my honor as a gentleman that I will not so long as I am a member of the Kentucky State Medical Association practice division of fees in any form; neither by collecting fees from others referring patients to me, nor by permitting them to collect fees from me, nor will I make joint fees with physicians or surgeons referring patients to me for operation or consultation; neither will I in any way, directly or indirectly, compensate anyone referring patients to me nor will I utilize any man as an assistant as a subterfuge for this purpose.

Section 2. Honorary Members. Any physician possessed of scientific attainments who is a member of a constituent State Medical Association, and who has participated in the program of the Scientific Session and who is not a citizen of Kentucky, may by unanimous vote of the House of Delegates, be elected to honorary membership. Honorary members shall be entitled to the privilege of the floor in all scientific sessions.

Section 3. The name of a physician upon the properly certified roster of members, or list of delegates, of a chartered county society which has paid its annual assessment, shall be *prima facie* evidence of his right to register at the Annual Session in the respective bodies of this Association.

Section 4. No persons who are under sentence of suspension or expulsion from any component society of this Association, or whose name has been dropped from its rolls of membership shall be entitled to any of the rights or benefits of this Association, nor its proceedings until such time as he has been relieved of such liability.

Section 5. Each member in attendance at the Annual Session shall enter his name on the registration book indicating the component society of which he is a member. When his right to membership has been verified by reference to the roster of the society, he shall receive a badge which shall be evidence of his right to all the privileges of membership at that session. No member or delegate shall take part in any of the proceedings of an annual session until he has complied with the provisions of this section.

CHAPTER II. ANNUAL AND SPECIAL SESSION OF THE ASSOCIATION

Section 1. The Association shall hold an annual session, meeting every third year in the city of Louisville, and the other two

years at some point in the State fixed at the preceding annual session.

CHAPTER III. GENERAL MEETING

Section 1. The General Meeting shall include all registered members, delegates, and guests, who shall have equal rights to participate in the proceedings and discussions, and except guests, to vote on pending questions. Each General Meeting shall be presided over by the President or in his absence or disability or upon his request, by one of the Vice-Presidents. Before it, at such time and place as may have been arranged, shall be delivered the annual address of the President, and the annual orations and the entire time of the sessions as far as may be, shall be devoted to papers and discussions relating to scientific medicine.

Section 2. The General Meeting shall have authority to create committees or commissions for scientific investigation of special interest and importance to the profession and public, and to receive and dispose of reports of the same; but any expense in connection therewith must first be approved by the House of Delegates.

Section 3. Except by special vote, the order of exercises, papers and discussions as set forth in the official program shall be followed from day to day until it has been completed.

Section 4. No address or paper before the Association except those of the President and orators shall occupy more than twenty minutes in its delivery; and no member shall speak longer than five minutes, nor more than once on any subject.

Section 5. All papers read before the Association shall be its property. Each paper shall be deposited with the Secretary when read and if this is not done it shall not be published.

CHAPTER IV. HOUSE OF DELEGATES

Section 1. The House of Delegates shall meet annually at the time and place of the Annual Session of the Association and shall so fix its hours of meeting as not to conflict with the first General Meeting of the Association, or with the meeting held for the address of the President and the annual orations so as to give delegates an opportunity to attend the other scientific proceedings and discussions so far as is consistent with their duties. But if the business interest of the association and profession require, it may meet in advance or remain in session after the final adjournment of the General Meeting. The House of Delegates may be called into special session by the President with the approval of the Council and a special session of the House of Delegates shall be called by the President on a written request of the Delegates representing fifty or more component county societies. When such special session is called the Secretary shall mail a notice of the time and place and the purpose of such meeting to the last known address of each member of the House of Delegates at least ten days before such special session.

Section 2. Each component county society shall be entitled to send to the House of Delegates each year one delegate for every twenty-five members, and one for each major fraction thereof, but each county society holding charter from the Association, which has made its annual report and paid its assessments as provided in this Constitution and By-Laws shall be entitled to one delegate. In case the regularly elected delegate or alternate is unable to attend the annual meeting of the Association, the President of the county society may in writing appoint an alternate, who shall have the rights and privileges of a delegate.

Section 3. A majority of the registered delegates shall constitute a quorum and all of the meetings of the House of Delegates shall be open to members of the Association.

Section 4. It shall, through its officers, Advisory Council, and otherwise, give diligent attention to and foster the scientific work and spirit of the Association, and shall constantly study and strive to make each Annual Session a stepping stone to further ones of higher interest.

Section 5. It shall consider and advise as to material interest of the profession, and of the public in those important matters wherein it is dependent upon the profession, and shall use its influence to secure and enforce all proper medical and public health legislation, and to diffuse popular information in relation thereto.

Section 6. It shall make careful inquiry into the condition of the profession of each county in the State, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse between physicians of the same lo-

cality and shall continue these efforts until every physician in every county of the State who can be made reputable, has been brought under medical society influence.

Section 7. It shall encourage post-graduate work in medical centers as well as home study and research and shall endeavor to have the results of the same utilized and intelligently discussed in the county societies. With these ends in view, five years after the adoption of the By-Laws, no voluntary paper shall be placed upon the annual program nor be heard in the Association which has not first been read in the county society of which the author is a member.

Section 8. It shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that body.

Section 9. It shall upon application provide and issue charters to county societies organized to conform to the spirit of the Constitution and By-Laws.

Section 10. In sparsely settled sections it shall have authority to organize the physicians of two or more counties to be designated by hyphenating the names of two or more counties so as to distinguish them from district and other classes of societies and these societies, when organized and chartered shall be entitled to all the privileges and representation provided therein for county societies, until such counties may be organized separately.

Section 11. It may divide the counties of the State into Councilor Districts, and, when the best interests of the Association and profession will be promoted thereby, organize in each district a medical society, to meet midway between the annual sessions of the Association, and members of the chartered county societies and none other shall be members.

When so organized from the presidents of such district societies shall be chosen the Vice-Presidents of this Association and the Presidents of the county societies of the district shall be Vice-Presidents of such district societies.

Section 12. It shall have authority to appoint committees for special purposes from among members of the Association who are not members of the House of Delegates and such committees may report to the House of Delegates in person, and may participate in the debate thereon.

Section 13. It shall approve all memorials and resolutions issued in the name of the Association before the same shall become effective.

Section 14. It shall present a summary of its proceedings to the last General Meeting of each Annual Session, and shall publish the same in the Journal.

Chapter V. Election of Officers

Section 1. All elections shall be by secret ballot, and a majority of the votes cast shall be necessary to elect, provided, however, that when there are more than two nominees the nominee receiving the least number of votes on the first ballot shall be dropped and the balloting continue until an election occurs in like manner.

Section 2. Any member known to have directly or indirectly solicited votes for, or sought any office within the gift of this Association shall be ineligible for any office for two years.

Section 3. The election of officers shall be the order of business in the House of Delegates on the last day of the General Session.

Section 4. Nominations for President-Elect shall be called for by counties.

Chapter VI. Duties of Officers

Section 1. The President shall preside at all meetings of the Association and of the House of Delegates; shall appoint all committees not otherwise provided for: shall deliver an annual address at such time as may be arranged; shall give a deciding vote in case of a tie, and shall perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession of the State during his term of office and so far as practicable, shall visit by appointment, the various sections of the State and assist the Councilors in building up the county societies and in making their work more practical and useful.

Section 2. The President-Elect shall be chairman of the Committee on Scientific Work, and shall appoint one active member of the Association to serve on this Committee. He shall become President of the Association at the next annual meeting of the Scientific Session following his election as President-Elect. He shall assist the President in visitation of county and other meetings and shall be ex-officio a member of the House of Delegates with the right to vote. In event of death, resignation, or if he becomes permanently disqualified, his successor shall be elected by the House of Delegates and shall be installed as President of the Association at

the next annual meeting of the Scientific Session of the Association.

Section 3. The Vice-Presidents shall assist the President in the discharge of his duties. In the event of his death, resignation or removal, the Council shall elect one of the Vice- Presidents to succeed him.

Section 4. The Treasurer shall give bond for the trust imposed in him whenever the House of Delegates shall deem it requisite. He shall demand and receive all funds due the association, together with the bequests and donations. He shall, under the direction of the House of Delegates, sell or lease any real estate belonging to the Association and execute the necessary papers and shall in general subject to such direction have the care and management of the fiscal affairs of the Association. He shall pay money out of the Treasury only on written order of the President, countersigned by the Secretary; he shall subject his accounts to such examination as the House of Delegates may order, and he shall annually render an account of his doings and of the state of funds in his hands.

Section 5. The Secretary, acting with the Committee on Scientific Work, shall prepare and issue the program for and attend all meetings of the Association and of the House of Delegates and he shall keep minutes of their respective proceedings in separate record books. He shall charge upon his books the assessments against each component county society at the end of the fiscal year; he shall collect and make proper credits for the same and perform such other duties as may be assigned him. He shall be custodian of all record books and papers belonging to the Treasurer, and shall keep account of and promptly turn over to the Treasurer all funds of the association which may come into his hands. He shall provide for the registration of the members and delegates at the Annual Session. He shall keep a card index register of all practitioners of the State by counties, noting on each his status in relation to his county society and upon request shall transmit a copy of this list to the American Medical Association for publication. In so far as it is in his power he shall use the printed matter, correspondence and influence of his office to aid the Councilors in the organization and improvement of the county societies and in the extension of the power and usefulness of this Association. He shall conduct the official correspondence, notify members of meetings, officers of their election, and committees of their appointments and duties. He shall act as secretary of the Committee on Scientific Work. He shall be editor of the KENTUCKY MEDICAL JOURNAL. He shall employ such assistants as may be ordered by the Council or the House of Delegates. He shall annually make a report of his doings to the House of Delegates.

In order that the Secretary may be enabled to give that amount of his time to his duties which will permit of his becoming proficient it is desirable that he shall receive some compensation. The amount of his salary shall be fixed by the House of Delegates.

CHAPTER VII. THE COUNCIL

Section 1. The Council shall be the executive body of the House of Delegates and between sessions shall exercise the powers conferred on the House of Delegates by the Constitution and By-Laws.

Section 2. The Council shall hold daily meetings during the annual session of the Association and at such other times as necessity may require, subject to the call of the Chairman or on petition of three councilors. It shall meet on the last day of the Annual Session of the Association for reorganization and for the outlining of the work for the ensuing year. At this meeting it shall elect a chairman and secretary and it shall keep a permanent record of its proceedings. It shall, through its Chairman, make an annual report to the House of Delegates at such time as may be provided, which report shall include an audit of the account of the Secretary and Treasurer and other agents of this Association and shall also specify the character and cost of all the publications of the Association during the year, and the amounts of all other property belonging to the Association, or under its control, with such suggestions as it may deem necessary. In the event of a vacancy in any office the Council may fill the same until the annual election.

Section 3. Each Councilor shall be organizer, peacemaker and censor for his district. He shall visit each county in his district at least once a year for the purpose of organizing component societies where none exist, for inquiring into the condition of the profession and for improving and increasing the zeal of the county societies and their members. He shall make an annual report of his doings, and of the condition of the profession of each county in his district to each Annual Session of the House of Delegates. The necessary trav-

eling expenses incurred by Councilor in the line of his duties herein imposed may be allowed by the House of Delegates upon a proper itemized statement, but this shall not be construed to include his expense in attending the Annual Session of the Association.

Section 4. Collectively the Council shall be the Board of Censors of the Association. It shall consider all questions involving the right and standing of members, whether in relation to other members, to the component societies or to this Association. All questions on an ethical nature brought before the House of Delegates of the General Meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members or a county society upon which appeal is taken from the decision of an individual Councilor. Its decision in all such cases shall be final.

Section 5. The Council shall have the right to communicate the views of the profession and of the Association in regard to health, sanitation and other important matters to the public and the lay press. Such communications shall be officially signed by the chairman and secretary of the Council as such.

Section 6. The Council shall provide for and superintend the publication and distribution of all proceedings, transactions and memoirs of the Association and shall have authority to appoint such assistants to the editors as it deems necessary. It shall manage and conduct the KENTUCKY MEDICAL JOURNAL, which is the organ of the Association, and all money received by the JOURNAL, the Council or any officer of the Association, shall be paid to the Treasurer of the Association on the first of each month.

Section 7. All reports on scientific subjects and all scientific discussions and papers read before the Association shall be referred to the KENTUCKY MEDICAL JOURNAL, for publication. The editor, with the consent of the Councilor for the District in which he resides, may curtail or abstract papers or discussions, and the Council may return any paper to its author which it may not consider suitable for publication.

Section 8. All commercial exhibits during the Annual Session shall be within the control and direction of the Council.

CHAPTER VIII. COMMITTEES

Section 1. The standing committees shall be as follows:

A Committee on Scientific Work.
A Committee on Public Relations.
A Committee on Medical Education.
A Medico-Legal Committee.

A Committee on Arrangements, and such other committees as may be necessary. Such committees shall be elected by the House of Delegates, unless otherwise provided.

Section 2. The Committee on Scientific Work shall consist of three members of which the President-elect shall be a member and Chairman and the Secretary shall be a member and Secretary and shall determine the character and scope of the scientific proceedings of the Association, subject to the provisions or the instructions of the House of Delegates or of the Association or to the provisions of the Constitution and By-Laws. Thirty days previous to each annual session it shall prepare and issue a program announcing the order in which papers, discussions and other business shall be presented which shall be adhered to by the Association as nearly as practicable.

Section 3. The Committee on Public Relations shall consist of three members and the President and Secretary. Under the direction of the House of Delegates it shall represent the Association in securing and enforcing legislation in the interest of the public health and scientific medicine. It shall keep in touch with the profession and public opinions, shall endeavor to shape legislation so as to secure the best results for the whole people and shall utilize every organized influence in local, state and national affairs and elections. Its work shall be done with dignity becoming a great profession and with that wisdom which will make effective its work and influence. It shall have authority to be heard before the entire Association upon questions of great concern at such times as may be arranged during the annual session.

Section 4. The Committee on Arrangements shall consist of the component society in the territory in which the annual session is to be held. It shall by committees of its own selection, provide suitable accommodations for the meeting places of the Association and of the House of Delegates, and of their respective committees and shall have general charge of all arrangements. Its Chairman shall report an outline of the arrangements to the Secretary for publication in the program and shall make additional announcements dur-

ing the session as occasion may require.

Section 5. The Medico-Legal Committee shall consist of three members, one of whom, the Chairman, shall be elected by the Council for five years, and the Secretary and Treasurer shall be the other two members *ex-officio*. This committee shall select and fix the compensation for an attorney, who shall act as General Counsel, and if required, additional local counsel. The Association through this Committee shall defend its members who are in good standing against unjust suits for malpractice.

Section 6. The Committee in Medical Education shall consist of three members who have been appointed by the President and shall serve for one year. It shall prepare a report covering its activities during the year to be presented to the House of Delegates.

Chapter IX. Assessments and Expenditures

Section 1. The assessment of five dollars per capita on the membership of the component societies is hereby made the annual dues of this Association. The Secretary of each county society shall forward its assessment together with it roster of all officers and members, list of delegates, and list of non-affiliated physicians of the county to the Secretary of this Association on the first day of January in each year.

Section 2. Any county society which fails to pay its assessments, or make the report required, on or before the first day of April in each year, shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Association or of the House of Delegates until such requirements have been met.

Section 3. All motions or resolutions appropriating money shall specify a definite amount or so much thereof as may be necessary for the purpose indicated and must be approved by the Council and House of Delegates.

Chapter X. Rules of Conduct

The Principles set forth in the Principles of Ethics of the American Medical Association shall govern the conduct of members in their relation to each other and to the public.

Chapter XI. Rules of Order

The deliberations of this Association shall be governed by parliamentary usage as contained in Roberts Rules of Order, unless otherwise determined by a vote of its respective bodies.

Chapter XII. County Societies

Section 1. All county societies now in affiliation with the State Association or those that may hereafter be organized in this State, which have adopted principles of organization not in conflict with this Constitution and By-Laws shall upon application to the House of Delegates, receive a charter from and become a component part of this Association.

Section 2. As rapidly as can be done after the adoption of this Constitution and By-Laws, a medical society shall be organized in every county in the State in which no component society exists, and charters shall be issued thereto.

Section 3. Charters shall be issued only upon approval of the House of Delegates and shall be signed by the President and Secretary of this Association. The House of Delegates shall have authority to revoke the charter of any component county society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws.

Section 4. Only one component medical society shall be chartered in any county. When more than one county society exists friendly overtures and concessions shall be made with the aid of the Councilor of the District if necessary and all of the members brought into one organization. In case of failure to unite, an appeal may be made to the Council, which shall decide what action shall be taken.

Section 5. Each county society shall judge of the qualifications of its own members, but as such societies are the only portals to this Association every reputable and legally registered physician who is practicing, or who will agree to practice non-sectarian medicine shall be entitled to membership. Before a charter is issued to any county society, full and ample notice and opportunity shall be given to every physician in the country to become a member.

Section 6. Any physician who may feel aggrieved by the action of the society of the county in refusing him membership, or in suspending or expelling him, shall have the right to appeal to the Council, which upon a majority vote may permit

him to become a member of an adjacent county society.

Section 7. In hearing appeals, the Council may admit oral or written evidence as in its judgment will best and most fairly present the facts, but in case of every appeal, both as a board and as individual councilors in district and county work, effort at conciliation and compromise shall precede all such hearings.

Section 8. When a member in good standing in a component society moves to another county in the State, his name, upon request, shall be transferred without cost to the roster of the county society into whose jurisdiction he moves.

Section 9. A physician living in or near a county line may hold membership in that county most convenient for him to attend, on permission of the society in whose jurisdiction he resides.

Section 10. Each county society shall have general direction of the affairs of the profession in the county, and its influence shall be constantly exerted for bettering the scientific, moral and material conditions of every physician in the county; and systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it embraces every qualified physician in the county.

Section 11. Frequent meetings shall be encouraged, and the most attractive programs arranged that are possible. The younger members shall be especially encouraged to do post-graduate and original research work, and to give the society the first benefit of such labors. Official position and other preferences shall be unstintingly given to such members.

Section 12. At the time of the annual election of officers each county society shall elect a delegate or delegates to represent it in the House of Delegates of this Association in the proportion of one delegate to each twenty-five members or major fraction thereof, and the secretary of the society shall send a list of such delegates to the Secretary of this Association at least sixty days before the Annual Session.

Section 13. The Secretary of each county society shall keep a roster of its members and a list of the non-affiliated registered physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this State, and such other information as may be deemed necessary. He shall furnish an official report containing such information, upon blanks supplied him for the purpose, to the Secretary of this Association, on the first day of January of each year, or as soon thereafter as possible, and at the same time that the dues accruing from the annual assessment are sent in. In keeping such roster the Secretray shall note any change in the personnel of the profession by death, or by removal to or from the county, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year.

Section 14. The Secretary of each county society shall report to the Kentucky Medical Journal full minutes of each meeting and forward to it all scientific papers and discussions which the society shall consider worthy of publication.

Chapter XIII. Amendments

These By-Laws may be amended by any Annual Session by a two-thirds vote of all the delegates present at that session, after the amendment has been laid on the table for one day.

CONSTITUTION AND BY-LAWS FOR COUNTY SOCIETIES

Prepared by the Committee on Organization of the American Medical Association of Which the Late Dr. J. N. McCormack Was Chairman

Article I.Name and Title of the Society

The name and title of this organization shall be the ———————— County Medical Society.

Article II. Purpose of the Society

The purpose of this society shall be to bring into one organization the physicians of ———————— County, so that by frequent meetings and full and frank interchange of views they may secure such intelligent unity and harmony in every phase of their labor as will elevate and make effective the opinions of the profession in all scientific, legislative, public health, material and social affairs, to the end that the profession may receive that respect and support within its own ranks and from the community to which its honorable history and great achievments entitle it; and with other county societies to form the ———————— State Medical Association, and through it, with other state associations, to form and maintain the American Medical Association.

ARTICLE III. ELIGIBILITY

Every legally registered physician residing and practicing in ———— County who is of good moral and professional standing and who does not support or practice, or claim to practice, any exclusive system of medicine shall be eligible for membership.

ARTICLE IV. MEETINGS

Regular meetings shall be held at such time and place as may be determined by the Society.

Special meetings may be called by the President and shall be called on a written request of five members. A call for a special meeting shall state the object of such meeting, at which no business except that stated in the call shall be transacted.

ARTICLE V. OFFICERS

The officers of this Society shall consist of a President, Vice-President, Secretary, Treasurer, Delegates and Board of three Censors. These officers, except the Delegates and Board of Censors, shall be elected annually. Delegates shall be elected for two years, and in accordance with the constitution and by-laws of the state association, one member of the Board of Censors shall be elected each year to serve for three years, provided that at the first election after the adoption of this constitution one member of the Board shall be elected for one year, one for two, and one for three years.

ARTICLE VI. FUNDS AND EXPENSES

Funds for meeting the expenses of the Society shall be raised by annual dues, special assessments and voluntary contributions. Funds may be appropriated by vote of the Society for such purposes as will promote its welfare and that of the profession.

ARTICLE VII. CHARTER

The Society shall apply to the council of the state association for a charter at the meeting at which this constitution and by-laws are adopted, or as soon thereafter as practicable, and the charter shall be kept by the Secretary.

ARTICLE VIII. INCORPORATION

The Society shall have authority to appoint a Board of Trustees and to provide for articles of incorporation whenever it may deem this necessary.

ARTICLE IX. AMENDMENTS

The Society may amend any article of this constitution by a two-thirds vote of its members at any regular meeting, provided that such amendment or amendments are not in conflict with the laws and regulations of the state association; provided, also that such amendments shall have been read in open sessions at a previous regular meeting and shall have been sent by mail to each member ten days in advance of the meeting at which final action is to be taken.

BY- LAWS

CHAPTER I. MEMBERSHIP

Section 1. The Society shall judge of the qualification of its members, but as it is the only door to the State Medical Association and to the American Medical Association for physicians within its jurisdiction, every reputed and legally qualified physician of ———— County who does not support or practice or claim to practice, sectarian medicine shall be eligible to membership.

Section 2. A candidate for membership shall make application in writing and shall state his age, his college and date of graduation, the place in which he has practiced, and the date of registration in this state. The application must be accompanied by the admission fee and must be endorsed by two members of this Society. It shall be referred to the Board of Censors, who shall inquire into the standing of the applicant, assure themselves that he or she is duly registered according to the laws of the state, and report at the next regular meeting of this Society. Election shall be by ballot, and two thirds of the votes of the members present and voting shall be necessary to elect. The application shall be returned to the Secretary, who shall file it for future reference. Applications for membership from rejected candidates shall not be received within six months of such rejection.

Section 3. A physician, accompanying his application with a transfer card from another component county society of this or any state within 60 days of the issuance of said card shall be admitted without fee on a majority vote of the members present, and without the application being referred to the Board of Censors. Such application may be acted on at the meeting at which it is presented on the vote of three fourths of the members present, otherwise it shall lie over until the next regular meeting. No annual dues for the current year shall be charged against such members provided the same have been paid to the Society from which the applicant comes.

Section 4. A physician residing in an

immediately adjoining county may become a member of this Society in like manner and on the same terms as a physician living in this county, by permission of the county society of the county in which the applicant lives.

Section 5. A member in good standing who is free from all indebtedness to this Society, and against whom no charges are pending wishing to withdraw, shall be granted a transfer card. This card shall state the date the member associated himself with the Society, the date of issuance of the card, and shall be signed by the President and Secretary. It shall be accompanied with a copy of the application presented at the time the member joined the Society, for information to the Society to which the member desires to attach himself.

Section 6. All members shall be equally privileged to attend all meetings and take part in the proceedings, and shall be eligible to any office or honor within the gift of the Society so long as they conform to this constitution and by-laws, including the payment of dues. A member who is under sentence of suspension or expulsion shall not be permitted to take part in any of the proceedings or be eligible to any office until relieved of such disability. And, provided further, that none of the privileges of membership shall be extended to any person not a member of this Society except on a majority vote of the Society in regular meeting.

Section 7. A member who is guilty of a criminal offense or gross misconduct either as a physician or as a citizen, or who violates any of the provisions of this constitution and by-laws, shall be liable to censure, suspension or expulsion. Charges against a member must be made in writing and be delivered to the Secretary, who shall immediately furnish a copy to the accused and to the Chairman of the Board of Censors. The Board of Censors shall investigate the charges on their merits, but no action shall be taken by the Board within ten days of the presentation of the charges to the accused, nor before giving the accused and accusers ample opportunity to be heard. The board shall report (1) that the charges are not sustained; or (2) that the charges are sustained and that the accused be (a) censured, (b) suspended for a definite time, (c) expelled. Censure or suspension shall require a two-thirds vote of the members present and voting and a three-fourths vote of those present and voting shall be required to expell a member. No action shall be taken by the Secretary in such cases until at least six weeks have elapsed since filing of the charge. A member suspended for a definite time shall be reinstated at the expiration of the time.

Section 8. Kindly efforts in the interest of peace, conciliation or reformation, so far as possible and expedient, shall precede the filing of formal charges affecting the character or standing of a member, and the accused shall have opportunity to be heard in his own defense in all trials and proceedings of this nature.

Section 9. Members expelled from this Society for any cause shall be eligible for membership after one year from date of expulsion and on the same terms and in like manner as original applicants.

Chapter II. Powers and Duties

Section 1. This Society shall have general direction of the affairs of the medical profession of the county, and its influence shall be constantly exerted to better the scientific, material and social condition of every physician within its jurisdiction. Systematic efforts shall be made by each member, and by the Society as a whole, to increase the membership until it embraces every reputable physician in the county.

Section 2. A meeting shall be held at—— p. m. on the ———— in each month (or oftener). ——— members shall constitute a quorum.

The officers and committee on program shall profit by experiences and by example of other similar societies, and strive to arrange for the most attractive and successful proceedings for each meeting. Crisp papers and discussions and reports of cases shall be arranged for and encouraged, and tedious and profitless proceedings and discussions shall be avoided as far as practicable.

Section 3. Agreements and schedules for fees shall not be made by this Society, but at least one meeting during each year shall be set apart for discussion of the business affairs of the profession of the county, with the view of adopting the best methods for the guidance of all. In all proper ways the public shall be taught that business methods and prompt collections are essential to the equipment of the modern physician and surgeon and that it suffers even more than the profession when this is not recognized.

Section 4. This Society shall endeavor to educate its members to the belief that

the physician should be a leader in his community, in character, in learning, in dignified and mannerly bearing, and in courteous and open treatment of his brother physicians, to the end that the profession may occupy that place in its own and the public estimation to which it is entitled.

Chapter III. Officers

Section 1. The officers of the Society shall be elected at the December meeting in each year which shall be known as the annual meeting. Nominations shall be made by informal ballot, and all elections be by ballot. The vote of the majority of all the members present shall be necessary to an election.

Section 2. The President shall preside at the meetings of the Society, and perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession in the county during the year, and it shall be his pride and ambition to leave it in better condition as regards both scientific attainments and harmony than at the beginning of his term of office.

Section 3. The Vice-President shall assist the President in the performance of his duties, shall preside in the absence and on his death, resignation or removal from the county, shall succeed to the presidency.

Section 4. The Secretary shall record the minutes of the meetings and receive and care for all records and papers belonging to the Society, including its charter. He shall notify each member of the Society as to the time and place of each meeting, and, whenever possible, give the program for the meeting. He shall keep account of and promptly turn over to the Treasurer all funds of the Society which may come into his hands. He shall make and keep a list of the members of the Society in good standing, noting of each his correct name, address, place and date of graduation, and the date of the certificate entitling him to practice medicine in this State; and in a separate list he shall note the same facts in regard to each legally qualified physician in this county not a member of this Society. It shall be his duty to send a copy of such lists on blank forms furnished him for the purpose, to the Secretary of the state association at such time as may be designated by the state association. In making such lists he shall endeavor to account for each physician who has moved into or out of the county during the year, stating when possible, both his present and past address. At the same time, and with his report of such lists of members and physicians, he shall transmit to the state association his order on the Treasurer for the annual dues of the Society.

Section 5. The Treasurer shall receive all dues and money belonging to the Society from the hands of the Secretary or members and shall pay out the same only on the written orders of the President countersigned by the Secretary.

Section 6. The Delegates shall attend and faithfully represent the members of this Society and the profession of this county in the House of Delegates of the state association, and shall make a report of the proceedings of that body to this Society at the earliest opportunity.

Chapter IV. Committees

Section 1. There shall be a Board of Censors as provided in the constitution, a Standing Committee on Program and Scientific Work, a Committee on Public Health and Legislation, and such special committees as may from time to time be deemed necessary.

Section 2. Board of Censors. This Board shall examine and report on the qualification of applicants for membership subjecting each applicant to such examination as it may deem necessary. It shall investigate charges preferred against a member, and report its conclusions and recommendations to the Society. In case of the absence of a member of the Board the President may appoint such member to fill the vacancy. The senior member of the Board in point of service shall be Chairman of the Board.

Section 3. Committee on Program and Scientific Work. This Committee shall consist of the President, Vice-President and Secretary. It shall be the duty to promote the scientific and social functions of the Society by arranging attractive programs for each meeting by urging each member to take part in the scientific work. It shall stimulate fraternalism and good feeling among the members in every way possible. Provisions should be made in this Section for the annual luncheons, dinners, etc., which the Committee believes to be an excellent way to bring members together. Such occasions should be made as inexpensive as possible.

Section 4. Committee on Public Health and Legislation. This committee shall consist of three members who shall be appointed annually by the President. It shall be its duty to enforce and support the sanitary and medical laws of the state in

this county, to co-operate with the Committee on Public Policy and Legislation of the state association in all matters pertaining to legislation and to prosecute quacks and medical pretenders in this county.

Chapter V. Funds and Expenses

Section 1. The admission fee, which must accompany the application, shall be $———and shall include the annual dues for the fiscal year. The admission fee shall be returned if the applicant is not accepted.

Section 2. The annual dues shall be $——— and shall be payable on January 1 of each year. Any member who shall fail to pay his annual dues by April 1 shall be held as suspended without action on the part of the Society. A member suspended for non-payment of dues shall be restored in full membership on payment of all indebtedness. Members more than one year in arrears shall be dropped from the roll of members.

Section 3. The fiscal year of this Society shall be from January to December inclusive.

Chapter VI. Order of Business

The order of business shall be as follows:

1. Call to order by the President.
2. Reading of the minutes of last meeting.
3. Clinical cases.
4. Papers and discussions.
5. Unfinished business.
6. Miscellaneous business.
7. Announcements.
8. Adjournment.

Chapter VII. Rules of Order

The deliberation of this Society shall be governed by parliamentary usage as contained in Roberts' Rules of Order, unless otherwise determined by vote.

Chapter VIII. Principles of Medical Ethics

The Principles of Medical Ethics of the American Medical Association shall govern this Society.

Chapter IX. Amendment

These by-laws may be amended at any regular meeting by a two-thirds vote provided that such amendment has been read in open session at the preceding regular meeting and a copy of the same has been sent to each member by the Secretary ten days in advance of the meeting at which final action is to be taken.

REPORT OF TREASURER, A. W. DAVIS

To the Council of the Kentucky State Medical Association:
Gentlemen:

We submit herewith report of our audit of the books and records of your Secretary, P. E. Blackerby, and your Treasurer, A. W. Davis, for the period beginning September 1, 1943 and ending September 1, 1944.

The various exhibits and statements submitted herewith set forth in detail the financial transactions for the period and show the condition of your affairs as reflected by your records.

We hereby certify that, in our opinion, the attached exhibits and statements correctly present the assets of the Kentucky State Medical Association at September 1, 1944, and its receipts and disbursements for the period from September 1, 1943, to September 1, 1944, as reflected by its records.

Respectfully submitted,
Heimerdinger & Dennis
Certified Public Accountants

STATEMENT OF ASSETS
September 1, 1944

Cash—		
Treasurer's Checking Account at The Kentucky Bank and Trust Co., Madisonville, (Exhibit A)	$5,243.44	
Cash on hand for Deposit (Exhibit B)	191.00	$ 5,434.44
Treasurer's Savings Account at The Kentucky Bank and Trust Co., Madisonville (Exhibit C)		9,584.40
Student Loan Fund Account at The Kentucky Bank and Trust Co., Madisonville (Exhibit D)		289.26
Total Cash		$15.308.10
Bonds and Stocks in Possession of Treasurer (Exhibit E)		9,389.17
Office Furniture, Etc., (Exhibit F)		588.22
Miscellaneous Accounts Receivable (Exhibit G)		464.53
Total Assets		$25,750.02
Less Advance Deposits on Advertising and Technical Exhibit (Exhibit G) (Lexington Meeting)		917.00
Total Net Assets		$24,833.02

EXHIBIT A

Reconciliation of Treasurer's Accounts for the period from September 1, 1943 to September 1, 1944.

CHECKING ACCOUNT
THE KENTUCKY BANK AND TRUST COMPANY
MADISONVILLE

Balance agreeing with Secretary's last report (September 1. 1943)		$ 10.459.40
Receipts from operation of Association and Journal		18,473.02
Total		$28,932.42
Receipts, Book Fund		67.50
Total amount to be accounted for		$28,999.92
Disbursements for Kentucky State Medical Association and Journal	$15,756.48	
Disbursed for investment in Bonds	8,000.00	23,756.48
Balance in Treasurer's Checking Account (September 1, 1944)		$ 5,243.44

Reconciliation of above balance with statement received from The Kentucky Bank and Trust Co.:		
Treasurer's Checking Account.....		$ 7,628.43
Less Vouchers outstanding, viz:		
104—April 29, 1944—		
Paul W. Atkins.....$	5.00	
123—May 31, 1944—		
Breathitt County Medical Society....	10.00	
124—May 31, 1944—		
Bullitt County Medical Society.....	5.00	
131-a—May 31, 1944—		
Fayette County Medical Society.....	20.00*	
135—May 31, 1944—		
Graves County Medical Society.....	15.00	
143—May 31, 1944—		
Hopkins County Medical Society.....	15.00*	
187—June 30, 1944—		
Bowling Green Postmaster.....	50.00	
190—June 30, 1944—		
State Department of Health.....	3.93	
190 a—June 30, 1944—		
Chas. O'Connell, Sec. of State.....	5.00	
194—June 30, 1944—		
Pulaski County Medical Society.....	5.00	
195—July 31, 1944—		
P. E. Blackerby.....106.65		
196—July 31, 1944—		
Elizabeth C. Lambert.....	34.65	
197—July 31, 1944—		
State Department of Health.....	185.00	
198—July 31, 1944—		
Curtis & Curtis, Attorneys.....	150.00	
199—July 31, 1944—		
Louisville Postmaster	27.36	
200—July 31, 1944—		
Calloway County Medical Society....	5.00	
201—July 31, 1944—		
Fulton County Medical Society.....	5.00	
202—July 31, 1944—		
Graves County Medical Society.....	10.00	
203—July 31, 1944—		
Perry County Medical Society.....	5.00	
204—July 31, 1944—		
Jefferson County Medical Society....	60.00	
205—July 31, 1944—		
Nelson County Medical Society.....	5.00	
206—July 31, 1944—		
Madison County Medical Society....	25.00	
207—July 31, 1944—		
Woman's Auxiliary K.S.M.A.....	7.35	
208—July 31, 1944—		
Bush-Krebs Co.	25.25	
209—July 31, 1944—		
State Department of Health.....	7.00	
210—July 31, 1944—		
Times Journal Publishing Co.....	666.50	
211—August 31, 1944—		
P. E. Blackerby.....	106.65	
212—August 31, 1944—		
Elizabeth C. Lambert.....	34.65	
213—August 31, 1944—		
State Department of Health.....	185.00	
214—August 31, 1944—		
Times Journal Publishing Co.....	600.00	
*Checks being held awaiting clarification of membership dues from Co. Society.....$		2,384.99
Balance agreeing with Treasurer's Bal.....$		5,243.44

Vouchers Nos. 211 through 214 are in the hands of the Secretary to be delivered when due.

EXHIBIT B

Cash on Hand

For Deposit August 1, 1944

CHECKING ACCOUNT ITEMS:		
ADVERTISERS:		
R. Hayes Davis.....$	1.50	
Frank Pirkey	2.00	$ 3.50
EXHIBIT SPACE:		
The Borden Company.....$85.00		
The Coca-Cola Company.....	65.00	150.00
		$153.50
SAVINGS ACCOUNT ITEM:		
Interest on 3 U. S. Savings Bonds War Series G - M2318050G, M2318051G and M2318052G, due August 1, 1944		37.50
Total		$191.00

EXHIBIT C

Savings Account

The Kentucky Bank and Trust Company

Madisonville

RECEIPTS		
Balance agreeing with Secretary's report, September 1, 1943.....		9,489.50
Dividends on Louisville Title Mortgage Company Certificates Nos 3069 and 1701$	32.40	
Interest on U. S. Savings Bond, War Series G - V 309469 G purchased Jan. 20,, 1944.....	62.50	
Total.....		94.90
Grand Total.....		$9,584.40

EXHIBIT D

Student Loan Fund Savings Account

The Kentucky Bank and Trust Company

Madisonville

Balance in Student Loan Fund Savings Account (per Secretary's last report, September 1, 1943) agreeing with statement August 1, 1944 received from The Kentucky Bank and Trust Co., Madisonville	$289.26

EXHIBIT E

Bonds and Stocks

September 1, 1944

Bonds:		
$1,000.00 United States Savings Bond No M 1395981-D, Purchased March 16, 1940.....	$	820.00
$5,000.00 United States Savings Bond War Series G - V 309469 G - Purchased January 20, 1944 (12 yr. 2 1-2 per cent interest bearing)...		5,000.00
3 United States Savings Bonds War Series G - Purchased February 6, 1944 (12 yr. 2 1-2 per cent interest bearing)		
No. M 2318050 G.....$1,000.00		
No. M 2318051 G..... 1,000.00		
No. M 2318052 G..... 1,000.00		3,000.00
Total Bonds ...		$8,820.00
Stocks:		
Louisville Title Mortgage Company Common Stock Certificate No. 3069 81 shs. and Certificate No. 1701 31-100 shs. (Estimated Market Value $569.17).....		569.17
Total Bonds and Stocks...		$9,389.17

The above bonds and stocks are held by The Kentucky Bank and Trust Company of Madisonville, in safekeeping for Amplias W. Davis, Treasurer.

EXHIBIT F

Invoice of the Property of the Association

September 1, 1944

41 Bound Volumes Kentucky Medical Journals, 1903-1943.....$		410.00
1 2 Drawer O. G. Mi File.....$	25.00	
Less 10 per cent Depreciation.....	2.50	22.50
6 No. 1546 Olive Green 4 x 6 Card Files.....$	26.90	
Less 10 per cent Depreciation.....	2.69	24.21
1 Portable Amplifier, Complete.....$	230.23	
Less 50 per cent Depreciation.....	115.11	115.12
2,000 No. 6 3-4 Non-stamped Envelopes at $1.04 per M.....		2.08
9,000 No. 10 Non-stamped Envelopes at $1.59 per M.....		14.31
Total	$	588.22

OLD PROPERTY

1 Filing Cabinet
1 Globe Safe with Fixtures
1 Cabinet for Addressograph, 36 Drawers
1 Cabinet for Addressograph, 18 Drawers
2,700 Medical Addressograph Plates
1 Allen Wales Adding Machine No. 10350

(All of the property listed under "Old Property" has been fully depreciated, and very little, if anything, could be realized from the sale should disposition be made of this property.)

EXHIBIT G

Miscellaneous Accounts Receivable
September 1, 1944

Cooperative Medical Advertising Bureau	$484.04	
Less Commission	121.01	$363.03
Advertising Other Than Cooperative:		
Guy Aud	$ 1.50	
A. M. Barnett	3.00	
B. G. Bus. University	11.00	
Walter Dean	10.50	
L. Ray Ellars	1.50	
W. B. Saunders Co.	21.00	
H. B. Strull	3.00	51.50
Exhibit Space:		
Brooks Denhard Surgical Instrument Co.		50.00
Total Miscellaneous Accounts Receivable		$464.53
ADVANCE DEPOSITS		
Exhibit Space, Lexington Meeting		$855.00
Advertising Other Than Cooperative		
J. G. Archer	$ 1.50	
Drs. Asman and Asman	7.50	
Lytle Atherton	13.50	
Drs. Bass and Bumgardner	1.50	
R. A. Bate	7.50	
Guy P. Grigsby	13.50	
Robert Kelly	7.50	
Frank A. Simon	7.50	
Stokes Hospital	2.00	62.00
Total Advance Deposits		$917.00
Louisville and Nashville Employees' Magazine, Script for Travel		264.00

EXHIBIT H

RECEIPTS

Checking Account:		
Collections from County Societies (Exhibit K)		$ 9,141.50
Income from Journal (Exhibit L)		9,331.52
Total Receipts of Checking Acct.		$18,473.02
Book Fund:		
Sale of "Medicine and Its Development in Kentucky" (Exhibit M)		67.50
Savings Account:		
Dividends and Interest on Investments (Exhibit C)		94.90
Total Receipts, All Funds		$18,635.42
Balance on Hand Sept. 1, 1943 Checking Account	$10,933.02	
Balance on Hand Sept. 1, 1943 Savings Account	9,489.50	
Balance on Hand Sept. 1, 1943 Student Loan Fund	289.26	
Balance on Hand Sept. 1, 1943 Book Fund	476.62	
Total Balances, Sept. 1, 1943		$20,238.16
Total Receipts and Beginning Balances, All Funds		$38,873.58
DISBURSEMENTS		
Total Disbursements, All Funds		$23,756.48
Balance on Hand this date, Checking Account	$ 5,649.56	
Balance on Hand this date, Savings Account	9,584.40	
Balance on Hand this date, Student Loan Fund	289.26	
Balance on Hand this date, Book Fund	406.12	
Total Balances on Hand this Date All Funds		$15,117.10
Checking Acct. $153.50, Savings Acct. $37.50, not included		
Total Disbursements and Ending Balances, All Funds		$38,873.38

EXHIBIT I

DISBURSEMENTS

Checking Account:			
Kentucky State Medical Association:			
Secretary's Salary		$ 1,620.00	
Less Social Security Tax Deductions	$ 16.20		
Less Withholding Tax Deductions	324.00	340.20	$ 1,279.80
State Department of Health Services Rendered			2,220.00
Secretary's Withholding Taxes			324.00
Social Security Taxes			57.90
Treasurer's Bond			12.50
Officers, Councilors and Committee Expense			324.05
Attorney's Fees, Medico-Legal Committee			375.00
Stenographer, Medico-Legal Committee		435.00	
Less Social Security Tax Deductions		4.35	430.65
Medico-Legal Committee Costs and Expenses			37.80
Postage			305.26
Telephone Calls and Telegrams			45.17
Association Sundries			234.61
Post Graduate Course Expense (Pediatric Section)			66.25
1943 Louisville Meeting Expense			1,103.76
1944 Lexington Meeting Expense			31.45
Appropriations to County Societies for Dues of Men in Armed Services			1,700.00
Return of Association Dues			5.00
Sub-Total (Expenditures)			$ 8,553.20
Bonds			8,000.00
Total Kentucky State Medical Association			$16,553.20
Kentucky Medical Jounal.			
Commission paid on Journal Advertisement Collections to Woman's Auxiliary, Kentucky State Medical Association			$ 7.35
Journal Printing			6,245.50
Journal Postage			150.00
Journal Envelopes			334.94
Journal Express and Freight			22.94
Journal Sundries			442.55
Total Kentucky Medical Journal			7,203.28
Total Checking Account Disbursements			$23,756.48

EXHIBIT J

Detailed list of receipts from County Societies from September 1943 to September 1944, compared with income of same period last year:

	1943	1944
Adair	$ 30.00	$ 30.00
Allen	20.00	20.00
Anderson	30.00	30.00
Ballard	15.00	20.00
Barren	90.00	90.00
Bath	25.00	25.00
Bell	80.00	145.00
Boone	40.00	20.00
Bourbon	65.00	80.00
Boyd	190.00	205.00
Boyle	65.00	60.00
Bracken-Pendleton	60.00	65.00
Breathitt	15.00	5.00
Breckinridge	40.00	35.00
Bullitt	40.00	15.00
Butler	15.00	15.00
Caldwell	35.00	50.00
Calloway	65.00	70.00
Campbell-Kenton	445.00	380.00
Carlisle	25.00	25.00
Carroll	30.00	20.00
Carter	35.00	35.00
Casey	20.00	20.00
Christian	175.00	135.00
Clark	60.00	75.00
Clay	35.00	30.00
Clinton	25.00	20.00
Crittenden	30.00	25.00
Cumberland	25.00	20.00
Daviess	140.00	175.00
Elliott		
Estill	25.00	30.00
Fayette	600.00	610.00
Fleming	40.00	50.00
Floyd	80.00	75.00
Franklin	100.00	95.00
Fulton	45.00	70.00
Gallatin	10.00	
Garrard	20.00	20.00
Grant	35.00	45.00
Graves	90.00	90.00
Grayson	20.00	25.00
Green	20.00	30.00
Greenup	40.00	40.00
Hancock	5.00	5.00
Hardin	70.00	90.00
Harlan	275.00	230.00
Harrison	55.00	70.00
Hart	25.00	30.00
Henderson	60.00	65.00
Henry	75.00	65.00
Hickman	15.00	20.00
Hopkins	110.00	115.00
Jackson	5.00	20.00
Jefferson	2,092.50	2,542.50
Jessamine	45.00	50.00
Johnson	60.00	60.00
Knott		
Knox	45.00	40.00
Larue	15.00	20.00
Laurel	35.00	35.00
Lawrence	30.00	30.00
Lee	15.00	15.00
Leslie		
Letcher	100.00	145.00
Lewis	20.00	20.00
Lincoln	30.00	50.00
Livingston	25.00	15.00
Logan	75.00	75.00
Lyon	20.00	20.00
McCracken	195.00	205.00
McCreary	20.00	30.00
McLean	20.00	25.00
Madison	160.00	150.00
Magoffin	10.00	10.00
Marion	50.00	45.00
Marshall	60.00	45.00
Martin	5.00	5.00
Mason	45.00	45.00
Meade		5.00
Menifee	15.00	20.00
Mercer	50.00	60.00
Metcalfe	25.00	20.00
Monroe	20.00	15.00
Montgomery	25.00	35.00
Morgan	15.00	20.00
Muhlenberg	55.00	65.00
Nelson	35.00	45.00
Nicholas	30.00	25.00
Ohio		35.00
Oldham		
Owen	15.00	15.00
Owsley	15.00	15.00
Perry	165.00	180.00
Pike	95.00	115.00
Powell	15.00	15.00
Pulaski	65.00	85.00
Robertson	10.00	10.00
Rockcastle	40.00	45.00
Rowan	20.00	25.00
Russell	20.00	5.00
Scott	75.00	75.00
Shelby	100.00	100.00
Simpson	35.00	30.00
Spencer	5.00	5.00
Taylor	30.00	40.00
Todd	20.00	20.00
Trigg	20.00	25.00
Trimble	5.00	5.00
Union	40.00	35.00
Warren-Edmonson	145.00	165.00
Washington	35.00	30.00
Wayne	15.00	30.00
Webster	45.00	25.00
Whitley	105.00	100.00
Wolfe	20.00	20.00
Woodford	5.00	55.00
	$8,427.50	$9,122.50

EXHIBIT K

Collections by Secretary on account of Kentucky State Medical Association, corresponding with checks, deposit slips and receipts filed:

1943			
Oct.	1—To	collections to date	$ 100.00
Nov.	1—To	collections to date	40.00
Dec.	1—To	collections to date	25.00
1944			
Jan.	1—To	collections to date	60.00
Feb.	1—To	collections to date	1,652.50
Mar.	1—To	collections to date	1,920.00
Apr.	1—To	collections to date	1,590.00
May	1—To	collections to date	1,320.00
June	1—To	collections to date	450.00
July	1—To	collections to date	575.00
Aug.	1—To	collections to date	1,395.00
		Total Dues	$9,127.50
		Pediatric Section:	
1944			
July	1—To	collections to date	14.00
		Total for Year	$9,141.50

EXHIBIT L

Collections by Editor on account of the Journal, corresponding with receipts transferred to the Treasurer as evidenced by checks, deposit slips and receipts on file:

RECEIPTS FROM ADVERTISING

1943	Cooperative Gross Amount	Medical Adv. Bureau Deduction	Bureau Net Receipts	Cards Local Advertising, etc.	Profit Distribution by Medical Adv. Bureau	Total Receipts from Jonrnal
September	$ 769.25	$ 192.31	$ 576.94	$ 469.92	$	$1,046.86
October	493.48	123.37	370.11	989.64		1,359.75
November	399.54	99.89	299.65	302.34		601.99
December	463.04	115.76	347.28	276.69		623.97
1944						
January	377.54	94.39	283.15	326.19	731.63	1,340.97
February	418.04	104.51	313.53	274.93		588.46
March	393.71	98.43	295.28	246.95		542.23
April	390.04	97.51	292.53	277.40		569.93
May	476.71	119.18	357.53	225.05		582.58
June	437.04	109.26	327.78	460.56		788.34
July	505.71	126.43	379.28	907.16		1,286.44
Totals	$5,124.10	$1,281.04	$3,843.06	$4,756.83	$ 731.63	$9,331.52

EXHIBIT M

Medicine and Its Development In Kentucky

Book Fund

RECEIPTS

Overdrawn Balance due Treasurer's Checking Account agreeing with Treasurer's last report, September 1, 1943 $ - 473.62

Number	Unit Price	Discount	Amount
67	$1.00		$67.00
	Postage and C.O.D. Fees		.50

Total Sales 67.50

Total $ - 406.12

Detail of Original Publication:

Total Sold	391
Books Donated to W. P. A.	10
Medical Library, State Department of Health	1
Books on Hand	598
Original Publication	1,000

EXHIBIT N

Total Membership by Councilor Districts and by Counties for 1944 as compared to that of 1943.

First District—T. A. Frazer, Marion, Counciler	1943	1944
Ballard	3	4
Caldwell	7	10
Calloway	13	14
Carlisle	5	5
Crittenden	6	5
Fulton	9	14
Graves	18	17
Hickman	3	4
Livingston	5	3
Lyon	4	4
Marshall	12	8
McCracken	38	41
Trigg	4	5
	127	134

Second District—E. L. Gates, Greenville, Councilor		
Daviess	28	35
Hancock	1	1
Henderson	12	13
Hopkins	22	23
McLean	4	5
Muhlenberg	11	13
Ohio	8	7
Union	8	7
Webster	9	5
	103	109

Third District—C. C. Howard, Glasgow, Counclior		
Allen	4	4
Barren	17	18
Butler	3	3
Christian	34	27
Cumberland	5	4
Logan	14	15
Metcalfe	5	4
Monroe	3	3
Simpson	7	6
Todd	4	4
Warren-Edmonson	29	32
	125	120

Fourth District—J. I. Greenwell, New Haven, Councilor		
Breckinridge	8	7
Bullitt	7	3
Grayson	4	5
Hardin	14	16
Hart	5	6
Larue	3	4
Meade	0	1
Nelson	7	9
Spencer	1	1
	49	52

Fifth District—J. B. Lukins, Louisville, Councilor		
Carroll	5	4
Franklin	20	19
Gallatin	2	0
Henry	15	13
Jefferson	395	498
(1943-45 dues paid during 1943)	2	
Oldham	0	0
Owen	3	3
Shelby	20	20
Trimble	1	1
	461	558

Sixth District—W. B. Atkinson, Campbellsville, Councilor		
Adair	6	6
Anderson	6	6
Boyle	13	12
Green	4	6
Marion	10	9
Mercer	10	12
Taylor	6	8
Washington	7	6
	62	65

Seventh District—Virgil Kinnaird, Lancaster, Councilor		
Casey	4	4
Clinton	5	4
Garrard	4	4
Lincoln	6	10
McCreary	4	6
Pulaski	13	17
Rockcastle	8	9
Russell	4	1
Wayne	3	6
	51	61

Eighth District—J. M. Blades, Butler, Councilor		
Boone	6	4
Bracken-Pendleton	12	13
Campbell-Kenton	85	75
Fleming	8	10
Grant	7	10
Harrison	11	14
Mason	8	8
Nicholas	6	5
Robertson	2	2
	145	141

Ninth District—Proctor Sparks, Ashland, Councilor		
Boyd	38	40
Carter	7	6
Elliott	0	0
Floyd	16	15
Greenup	8	8
Johnson	12	12
Lawrence	6	6
Lewis	4	4
Magoffin	2	2
Martin	1	1
Pike	19	23
	113	117

Tenth District—C. A. Vance, Lexington, Councilor		
Bath	5	5
Bourbon	13	16
Breathitt	3	1
Clark	12	15
Estill	5	6
Fayette	118	120
Jessamine	9	10
Lee	3	3
Madison	31	30
Menifee	3	3
Montgomery	5	7
Morgan	3	4
Owsley	3	3
Powell	3	3
Rowan	4	3
Scott	15	15
Wolfe	4	4
Woodford	1	4
	240	252

Eleventh District—H. K. Buttermore, Liggett, Councilor		
Bell	15	25
Clay	7	6
Harlan	54	46
Jackson	1	2
Knott	0	0
Knox	9	8
Laurel	7	7
Leslie	0	0
Letcher	20	29
Perry	32	35
Whitley	20	20
District Total	165	178
Grand Total	1,641	1,787

Reconciliation of Membership and Dues Collected for 1943 - 1944

	Number	Rate	Amount	Total Amount
Current Year Dues	1,784	$5.00	$8,920.00	
Current Year Dues	2	2.50	5.00	$8925.00

Transfer from W. Virginia to Grant County.....1
1944 Dues (Paid 1943)...1
Less 1 Harlan County dues paid in duplicate 1 -5.00

Total Membership...1,787 $8,920.00

Delinquent Dues Collected During 1943-1944

First District			
Graves	1	5.00	5.00
Marshall	1	5.00	5.00
Second District			
None			
Third District			
Warren-Edmonson	1	5.00	5.00
Fourth District			
Hardin	2	5.00	10.00
Fifth District			
Jefferson	9	5.00	45.00
Jefferson (1-2 year)	7	2.50	17.50
Sixth District			
None			
Seventh District			
None			
Eighth District			
Campbell-Kenton	1	5.00	5.00
Mason	1	5.00	5.00
Ninth District			
Boyd	1	5.00	5.00
Carter	1	5.00	5.00
Tenth District			
Fayette	2	5.00	10.00
Menifee	1	5.00	10.00
Rowan	2	5.00	10.00
Woodford	7	5.00	35.00
Eleventh District			
Bell	4	5.00	20.00
Jackson	2	5.00	10.00
Perry	1	5.00	5.00
Total Delinquent Dues Collected	44		$ 202.50
Total Collections	1,831		$9,122.50

EXHIBIT O

Secretary's Monthly Balance Sheet, Agreeing With Books.

1943
Sept. 1 Balance on hand (Checking Account).....$10,933.02
Balance on hand (Book Fund)..... - 473.62

Total Balance on Hand.....$10,459.40

		Disbursements	Collections	Balance
Oct. 1.	1Association and Journal	$ 1,466.45	$ 1,146.86	$10.139.81
Nov. 1	1 Association and Journal	1,298.73	1,399.75	
	Book Fund		55.00	10,295.83
Dec. 1	Association and Journal	2,230.15	626.99	8,692.67
1944				
Jan. 1	Association and Journal	954.57	683.97	
	Book Fund		1.24	8,423.31
Feb. 1	1 Association and Journal	6,140.93	2,993.47	5,275.85
March 1	Association and Journal	3,948.71	2,508.46	
	Book Fund		2.00	3,837.60
April 1	Association and Journal	971.10	2,132.23	
	Book Fund		3.26	5,001.99
May 1	Association and Journal	919.43	1,889.93	
	Book Fund		2.00	5,974.49
June 1	Association and Journal	2,469.65	1,032.58	4,537.42
July 1	Association and Journal	1,105.70	1,377.34	
	Book Fund		3.00	4,812.06
Aug. 1	Association and Journal	1.324.76	2,681.44	
	Book Fund		1.00	6,169.74
Sept. 1	Association and Journal	926.30		5,243.44
	Totals	$23,756.48	$18,540.52	
Balance on Hand, September 1, 1943:				
	Checking Account		10,933.02	
	Book Fund		- 473.62	$28,999.92
Balance on Hand, September 1, 1944:				
	Association and Journal		$ 5.649.56	
	Book Fund		- 406.02	
	Net Checking Account Balance		$ 5,243.44	
	Total Disbursements as above		23,756.48	$28,999.92

EXHIBIT P

Detailed Statement of Disbursements of A. W. Davis, M. D., Treasurer, Kentucky State Medical Association, each made on a Voucher Check signed by E. M. Howard, M. D., President, James H. Pritchett, M. D., Vice-President, V. A. Stilley, M. D., President, or James H. Pritchett, M. D., President, and P. E. Blackerby, M. D., Acting Secretary, or P. E. Blackerby, M. D., Secretary, and himself, from September 1, 1943 through August 31, 1944. All the following checks from September 15 through September 30, 1943 were approved by the Council and ordered paid by the House of Delegates.

1943				
Sept. 15—Voucher Check No. 1				$ 31.00
V. A. Stilley, M. D., Benton				
To expense as Councilor of 1st District			$ 31.00	
Sept. 15—Voucher Check No. 2				50.00
Heimerdinger & Dennis, Certified Public Accountants, Louisville				
To audit of records of A. T. McCormack, Secretary; P. E. Blackerby, Acting Secretary; A. W. Davis, Treasurer of the Kentucky State Medical Association, September 1, 1942 to September 1, 1943; Mrs. Luther Bach, Treasurer of the Woman's Auxiliary, and Mrs. Wm. H. Emrich, Business Manager of "The Quarterly", August 1, 1942 to August 1, 1943			50.00	
Sept. 15—Voucher Check No. 3				28.51
Louisville Postmaster				
To July and August postage			28.51	
Sept. 15—Voucher Check No. 4				1.99
State Department of Health				
To reimbursement for express, telephone, telegrams for Journal			1.99	
Sept. 15—Voucher Check No. 5				63.09
Bush-Krebs Co., Louisville				
To 16 copper halftones of portraits of doctors for Journal			63.09	
Sept. 15—Voucher Check No. 6				81.16
F. & V. Manufacturing Co., East Providence, R. I.				
To 202 bangles, Louisville, 1943			81.16	
Sept. 15—Voucher Check No. 7				20.00
Fred Haupt, Louisville				
To Flowers for A. T. McCormack			20.00	
Sept. 15—Voucher Check No. 8				2.15
W. K. Stewart Company, Louisville				
To 1 frame			2.15	
Sept. 15—Voucher Check No. 9				1.50
American Medical Association				
To 6 copies Journal A.M.A., August 21, 1943			1.50	
Sept. 25—Voucher Check No. 10				16.20
Collector of Internal Revenue, Louisville				
To Social Security taxes from January 1 through December 31			16.20	
Sept. 25—Voucher Check No. 11				598.50
The Times Journal Publishing Co.				
To 2300 September issue - 71 pages including 6 pt. tabular		608.00		
To 2 ads in red		17.00		
		625.00		
Less credit by Check No. 125 dated 8-31-43		600.00		
Balance due		25.00		
Less rebate on 59 Journals Short, Sept. Issue		6.00		
			19.00	
To 2100 October issue - 63 pages		453.00		
To 6 pt. tabular		15.00		
To 2 ads in red		17.00		
To return postage		2.00	487.00	
To 1000 annual programs			92.50	
			598.50	
Sept. 30—Voucher Check No. 12				106.65
P. E. Blackerby				
To September salary, Acting Secretary			135.00	
Less Social Security tax for September		1.35		
Less Withholding tax for September		27.00	28.35	
			106.65	
Sept. 30—Voucher Check No. 13				49.50
Elizabeth Conkling				
To September salary, Stenographer for Medico-Legal Committee			50.00	
Less Social Security tax for September			.50	
			49.50	

Sept. 30—Voucher Check No. 14				185.00
State Department of Health				
To services rendered for month of September			185.00	
Sept. 30—Voucher Check No. 15				25.75
Proctor Sparks, Ashland				
To expense as Councilor of 9th District			25.75	
Sept. 30—Voucher Check No. 16				63.50
Charles A. Vance, Lexington				
To expense as Councilor of 10th District			63.50	
Sept. 30—Voucher Check No. 17				14.35
State Department of Health				
To reimbursement for express, telephone and telegrams on Association business			14.35	
Sept. 30—Voucher Check No. 18				11.10
Collector of Internal Revenue, Louisville				
To Social Security taxes from July 1 through September 30, 1943				
1 per cent of pay roll paid as follows:				
A. T. McCormack, (Deceased)		2.70		
P. E. Blackerby		1.35		
Elizabeth Conkling		1.50	5.55	
To employees' share due from July 1 through September 30, 1943				
1 per cent of pay roll paid as follows:				
A. T. McCormack, (Deceased)		2.70		
P. E. Blackerby		1.35		
Elizabeth Conkling		1.50	5.55	
			11.10	
Sept. 30—Voucher Check No. 19				81.00
Collector of Internal Revenue, Louisville				
To Withholding tax from July 1 through September 30, 1943 deducted from salaries of the following:				
A. T. McCormack, (Deceased))			54.00	
P. E. Blackerby			27.00	
			81.00	
Sept. 30—Voucher Check No. 20				35.50
The Pendennis Club, Louisville				
To 15 dinners for councilors and officers of Kentucky State Medical Association			35.50	
Oct. 30—Voucher Check No. 21				106.65
P. E. Blackerby				
To October salary, Secretary			135.00	
Less Social Security tax for October		1.35		
Less Withholding tax for October		27.00	28.35	
			106.65	
Oct. 30—Voucher Check No. 22				34.65
Elizabeth Conkling				
To October salary, Stenographer for Medico-Legal Committee			35.00	
Less Social Security tax for October			.35	
			34.65	
Oct. 30—Voucher Check No. 23				185.00
State Department of Health				
To services rendered for month of October			185.00	
Oct. 30—Voucher Check No. 24				45.00
V. A. Stilley, Benton				
To expense to State Meeting as Councilor of 1st District			45.00	
Oct. 30—Voucher Check No. 25				38.90
Mayme Sullivan				
To State Meeting expense for self and assistant			38.90	
Oct. 30—Voucher Check No. 26				10.00
Elva V. Grant				
To State Meeting expense			10.00	
Oct. 30—Voucher Check No. 27				6.25
Ruth Flagg				
To State Meeting expense			6.25	
Oct. 30—Voucher Check No. 28				3.45
Blanche Fabyan				
To State Meeting expense			3.45	
Oct. 30—Voucher Check No. 29				1.70
Emily Stoecker				
To State Meeting expense			1.70	
Oct. 30—Voucher Check No. 30				20.00
Otho Haskins				
To Honorarium			20.00	
Oct. 30—Voucher Check No. 31				34.95
Louisville Postmaster				
To September postage			34.95	
Oct. 30—Voucher Check No. 32				50.00
Bowling Green Postmaster				
To postage for Journal			50.00	

Oct. 30—Voucher Check No. 33				21.56
State Department of Health				
To reimbursement for express, telephone and telegrams for Journal			21.56	
Oct. 30—Voucher Check No. 34				31.50
Art Embroidery Company, Louisville				
To 76 stars on service flag and lining			31.50	
Oct. 30—Voucher Check No. 35				24.11
To Brown Hotel, Louisville				
To banquet, 396 plates at $2.00		792.00		
Credit by cash, 10-6-43		768.00	24.00	
To telephone call,, 10-3-43, for State Meeting			.11	
			24.11	
Oct. 30—Voucher Check No. 36				19.81
Bush-Krebs Co., Louisville				
To 6 copper halftones of portrait, etchings, charts for Journal			19.81	
Oct. 30—Voucher Check No. 37				3.50
Enterprise Publishing Co., Harlan				
To printing 125 form letters			3.50	
Oct. 30—Voucher Check No. 38				181.95
Jos. T. Griffin Co., Louisville				
To erecting and dismantling scientific booths			164.40	
To sign work			17.55	
			181.95	
Oct. 30—Voucher Check No. 39				478.50
Times Journal Publishing Co.				
To 2100 November Issue - 63 pages			453.00	
To 3 ads in red			25.50	
			478.50	
Oct. 30—Voucher Check No. 40				1.25
Koehler Stamp & Stationery Co., Louisville				
To repairing 1 seal			1.25	
Nov. 30—Voucher Check No. 41				106.65
P. E. Blackerby				
To November salary, Secretary			135.00	
Less Social Security tax for November		1.35		
Less Withholding tax for November		27.00	28.35	
			106. 65	
Nov. 30—Voucher Check No. 42				34.65
Elizabeth Lambert				
To November salary, Stenographer for Medico-Legal Committee			35.00	
Less Social Security tax for November			.35	
			34.65	
Nov. 30—Voucher Check No. 43				185.00
State Department of Health				
To services rendered for month of November			185.00	
Nov. 30—Voucher Check No. 44				34.31
A. W. Davis, Madisonville				
To State Meeting expense			34.31	
Nov. 30—Voucher Check No. 45				1.40
Mayme Sullivan				
To reimbursement delegates' badges			1.40	
Nov. 30—Voucher Check No. 46				78.22
Louisville Postmaster				
To postage for October			78.22	
Nov. 30—Voucher Check No. 47				112.25
Brown Hotel, Louisville				
To expenses for speakers and guests - A. W. Allen, Col. Claude Beck, W. H. Cole, Brig. Gen. F. W. Rankin, E. L. Turner, Sir H. Whittington, State Meeting			99.32	
To express on A. M. A. Scientific Exhibits			12.93	
			112.25	
Nov. 30—Voucher Check No. 48				12.50
Lt. Col. Woodford B. Troutman, Nashville				
To expense as speaker at Post Graduate Course meeting			12.50	
Nov. 30—Voucher Check No. 49				8.02
Bush-Krebs Co., Louisville				
To 2 multigraph plates "Signatures" - Oscar O. Miller, V. A. Stilley			4.00	
To 1 copper halftone of dinner group			4.02	
			8.02	
Nov. 30—Voucher Check No. 50				39.76
Courier-Journal Job Printing Co., Louisville				
To 2500 inserts of photo of V. A. Stilley, printed 1 color, 7 1-2 x 10 1-2			39.00	
To express			.76	
			39.76	

Nov. 30—Voucher Check No. 51				5.36
Fred Haupt, Louisville				
To flowers for Doctor Kinnaird			5.36	
Nov. 30—Voucher Check No. 52				5.90
Koehler Stamp & Stationery Co., Louisville				
To 2 signature cuts and stamps - Oscar O. Miller, V. A. Stilley			5.90	
Nov. 30—Voucher Check No. 53				334.94
Premier Paper Company, Louisville				
To 53,250 catalogue envelopes at $6.29 per M			334.94	
Nov. 30—Voucher Check No. 54				484.34
The Master Reporting Co., Inc., Washington, D. C.				
To reporting Kentucky State Medical Association, Louisville, October 4-6, 1943, as follows:				
HOUSE OF DELEGATES:				
668.5 folios original transcript at 30c		200.55		
668.5 folios of carbon at 4c		26.74	227.29	
SCIENTIFIC SESSIONS:				
6 sessions at $5.00			30.00	
EVENING SESSION:				
37.5 folios of original transcript at 30c		11.25		
37.5 folios of carbon at 4c		1.50	12.75	
TUESDAY SCIENTIFIC SESSIONS:				
3 at minimum charge of 15.00 per session			45.00	
WEDNESDAY SCIENTIFIC SESSIONS:				
250 folios of original transcript at 30c		75.00		
250 folios of carbon at 4c		10.00	85.00	
			400.04	
Travel Expenses			83.52	
Express			.78	
			484.34	
Nov. 30—Voucher Check No. 55				8.35
State Department of Health				
To reimbursement for express, telegrams, telephone, for the Journal			8.35	
Nov. 30—Voucher Check No. 56				778.50
The Times Journal Publishing Co.				
To 2125 December Issue . 103 pages			749.00	
To index in 6 pt			7.50	
To inserts			5.00	
To 2 ads in red			17.00	
			778.50	
Dec. 22—Voucher Check No. 57				106.65
P. E. Blackerby				
To December salary, Secretary			135.00	
Less Social Security tax for December		1.35		
Less Withholding tax for December		27.00	28.35	
			106.65	
Dec. 22—Voucher Check No. 58				34.65
Elizabeth Lambert				
To December salary, Stenographer for Medico-Legal Committee			35.00	
Less Social Security tax for December			.35	
			34.65	
Dec. 22—Voucher Check No. 59				185.00
State Department of Health				
To services rendered for month of December			185.00	
Dec. 22—Voucher Check No. 60				58.65
H. K. Buttermore, Liggett				
To expense as Councilor of 11th District			58.65	
Dec. 22—Voucher Check No. 61				5.25
Benjamin L. Brock, Waverly Hills				
To expense to Post Graduate Course, meeting Mayfield			5.25	
Dec. 22—Voucher Check No. 62				4.50
A. J. Miller, Louisville				
To expense to Post Graduate Course, Mayfield			4.50	
Dec. 22—Voucher Check No. 63				16.51
Louisville Postmaster				
To November postage			16.51	
Dec. 22—Voucher Check No. 64				2.16
State Department of Health				
To reimbursement for express for Journal			2.16	
Dec. 22—Voucher Check No. 65				450.00
The Times Journal Publishing Co.				
To account of January issue			450.00	
Dec. 31—Voucher Check No. 66				10.20
Collector of Internal Revenue, Louisville				
To Social Security taxes from October 1 through Dec. 31, 1943				
1 per cent of pay roll paid as follows:				
P. E. Blackerby		4.05		
Elizabeth Lambert		1.05	5.10	
To employees' share due from October 1 through Dec. 31, 1943				
1 per cent of pay roll paid, as follows:				
P. E. Blackerby		4.05		
Elizabeth Lambert		1.05	5.10	
			10.20	

Dec. 31—Voucher Check No. 67				81.00
Collector of Internal Revenue, Louisville				
To Withholding tax from October 1 through December 31, 1943, deducted from salary of P. E Blackerby			81.00	
1944				
Jan. 18—Voucher Check No. 68				5,000.00
Kentucky Bank and Trust Co., Madisonville				
To purchase of War Bond			5,000.00	
Jan. 31—Voucher Check No 69				106.65
P. E. Blackerby				
To January salary, Secretary			135.00	
Less Social Security tax for January		1.35		
Less Withholding tax for January		27.00	28.35	
			106.65	
Jan. 31—Voucher No. 70				34.65
Elizabeth Lambert				
To January salary, Stenographer for Medico-Legal Committee			35.00	
Less Social Security tax for January			.35	
Jan. 31—Voucher Check No 71				185.00
State Department of Health				
To services rendered for month of January			185.00	
Jan. 31—Voucher Check No. 72				150.00
Curtis & Curtis, Attorneys at Law, Louisville				
To services rendered from July 1 through December 31, 1943			150.00	
Jan. 31—Voucher Check No. 73				19.14
Louisville Postmaster				
To December postage			19.14	
Jan. 31—Voucher Check No. 74				3.49
State Department of Health, Louisville				
To reimbursement for express for Journal, telegrams, telephone			3.49	
Jan. 31—Voucher Check No. 75				62.00
Courier-Journal Job Printing Co., Louisville				
To Membership cards			62.00	
Jan. 31—Voucher Check No. 76				580.00
The Times Journal Publishing Co.				
To 20 pages extra not charged in December issue		142.50		
To 6 pt. financial report in Dec. issue not chgd.		7.50	150.00	
To 2075 Jauuary issue - 59 pages		422.00		
To 2 ads in red		17.00	439.00	
			589.00	
Less credit by Check No. 65 dated 12-22-43			450.00	
Balance due			139.00	
To 2075 February issue - 59 pages		422.00		
To 2 ads in red		17.00		
To extra postage		2.00	441.00	
			580.00	
Feb. 29—Voucher Check No. 77				3,000.00
Kentucky Bank & Trust Co., Madisonville				
To purchase of bond			3,000.00	
Feb. 29—Voucher Check No. 78				106.65
P. E. Blackerby				
To February salary, Secretary			135.00	
Less Social Security tax for February		1.35		
Less Withholding tax for February		27.00	28.35	
			106.65	
Feb. 29—Voucher Check No. 79				34.65
Elizabeth Lambert				
To February salary, Stenographer for Medico-Legal Committee			35.00	
Less Social Security tax for February			.35	
			34.65	
Feb. 29—Voucher Check No. 80				185.00
State Department of Health				
To services rendered for month of February			185.00	
Feb. 29—Voucher Check No. 81				43.85
E. L. Gates, Greenville				
To expense as Councilor, 2nd District			43.85	
Feb. 29—Voucher Check No. 82				17.00
Emery S. Graham, Louisville				
To expense Lottie Hinkle vs. E. W. Stokes:				
Deposition of plaintiff for defense			15.60	
Copy of deposition of plaintiff			1.40	
			17.00	
Feb. 29—Voucher Check No. 83				13.17
Lonisville Postmaster				
To January postage			13.17	

Feb. 29—Voucher Check No. 84				5.81
Bush-Krebs Co., Louisville				
To 1 zinc etching of map of Kentucky and proofing of halftones			5.81	
Feb. 29—Voucher Check No. 85				4.50
Koehler Stamp & Stationery Co., Louisville				
To 1 signature stamp and cut			4.50	
Feb. 29—Voucher Check No. 86				50.00
Bowling Green Postmaster				
To postage for Journal			50.00	
Feb. 29—Voucher Check No. 87				10.00
Fred Haupt, Louisville				
To design for V. A. Stilley			10.00	
Feb. 29—Voucher Check No. 88				20.80
The Pendennis Club, Louisville				
To 8 dinners for Council Meeting, 1-12-44			20.80	
Feb. 29—Voucher Check No. 89				4.28
State Department of Health				
To reimbursement for express, telephone, telegrams for Journal			4.28	
Feb. 29—Voucher Check No. 90				453.00
The Times Journal Publishing Company				
To 2100 March issue - 59 pages			431.00	
To 2 ads in red			17.00	
To inserts			5.00	
			453.00	
Mar. 31—Voucher Check No. 91				106.65
P. E. Blackerby				
To March salary, Secretary			135.00	
Less Social Security tax for March		1.35		
Less Withholding tax for March		27.00	28.35	
			106.65	
Mar. 31.—Voucher Check No. 92				34.65
Elizabeth Lambert				
To March salary, Stenographer for Medico-Legal Committee			35.00	
Less Social Security tax for March			.35	
			34.65	
Mar. 31—Voucher Check No. 93				185.00
State Department of Health				
To services rendered for month of March			185.00	
Mar. 31—Voucher Check No. 94				81.00
Collector of Internal Revenue, Louisville				
To Withholding tax from January 1 through March 31, 1944 deducted from salary of P. E. Blackerby			81.00	
Mar. 31—Voucher Check No. 95				10.20
Collector of Internal Revenue, Louisville				
To Social Security taxes from January 1 through March 31, 1944				
1 per cent of pay roll paid, as follows:				
P. E. Blackerby		4.05		
Elizabeth Lambert		1.05	5.10	
To employees' share due from January 1 through March 31, 1944				
1 per cent of pay roll paid, as follows:				
P. E. Blackerby		4.05		
Elizabeth Lambert		1.05	5.10	
			10.20	
Mar. 31.—Voucher Check No. 96				19.97
Louisville Postmaster				
To February postage			19.97	
Mar. 31.—Voucher Check No. 97				38.22
Courier-Journal Job Printing Co., Louisville				
To 2,200 inserts of photo printed in 1 color 7 1-2 x 10 1-2—James H. Pritchett			37.50	
To express to Bowling Green			.72	
			38.22	
Mar. 31—Voucher Check No. 98				3.50
The Standard Printing Co., Louisville				
To binding 1 volume "Kentucky Medical Journal", year 1943			3.50	
Mar. 31—Voucher Check No. 99				12.41
State Department of Health				
To reimbursement for express, telephone, telegrams for Journal			12.41	
Mar. 31—Voucher Check No. 100				479.50
The Times Journal Publishing Co.				
To 2075 April issue, 64 pages			460.00	
To 2 ads in red			17.00	
To return postage			2.50	
			479.50	
Apr. 29—Voucher Check No. 101				106.65
P. E. Blackerby				
To April salary, Secretary			135.00	
Less Social Security tax for April		1.35		
Less Withholding tax for April		27.00	28.35	
			106.65	

Apr. 29—Voucher Check No. 102			34.65
Elizabeth Lambert			
To April salary, Stenographer for Medico-Legal Committee		35.00	
Less Social Security tax for April		.35	
		34.65	
Apr. 29—Voucher Check No. 103			185.00
State Department of Health			
To services rendered for month of April		185.00	
Apr. 29—Voucher Check No. 104			5.00
Paul W. Adkins, Kettle Island			
To return of dues paid in duplicate		5.00	
Apr. 29—Voucher Check No. 105			26.78
Louisville Postmaster			
To March postage		26.78	
Apr. 29—Voucher Check No. 106			1.65
W. K. Stewart Co., Louisville			
To 1 frame for picture and new glass		1.65	
Apr. 29—Voucher Check No. 107			1.90
To reimbursement for express, telephone, telegrams, for Journal		1.90	
Apr. 29—Voucher Check No. 108			462.00
The Times Journal Publishing Co.			
To 2100 May issue, 59 pages		439.00	
To 2 ads in red		17.00	
		456.00	
To Federal tax on 2 L.&N. mileage books		6.00	
		462.00	
Apr. 29—Voucher Check No. 109			75.00
Curtis & Curtis, Attorneys at Law, Louisville			
To services rendered in case, Lottie Hinkle vs. Dr. E. W. Stokes		75.00	
Apr. 29—Voucher Check No. 110			20.80
John H. Alsmiller, Clerk, Jefferson Circuit Court, Louisville			
To reimbursement for expenses in case, Lottie Hinkle vs. Dr. E. W. Stokes, as follows:			
Plaintiff: Clerk's Cost, tax, sheriff, deposition		18.25	
Defendants: Clerk's Cost		2.55	
		20.80	
May 31—Voucher Check No. 111			106.65
P. E. Blackerby			
To May salary, Secretary		135.00	
Less Social Security tax for May	1.35		
Less Withholding tax for May	27.00	28.35	
		106.65	
May 31—Voucher Check No. 112			34.65
Elizabeth Lambert			
To May salary, Stenographer for Medico-Legal Committee		35.00	
Less Social Security tax for May		.35	
		34.65	
May 31—Voucher Check No. 113			185.00
State Department of Health			
To services rendered for month of May		185.00	
May 31—Voucher Check No. 114			13.89
Louisville Postmaster			
To April postage		13.89	
May 31—Voucher Check No. 115			8.00
Electric Blue Print & Supply Co., Louisville			
To 200 blue prints of floor plan, State Meeting		8.00	
May 31—Voucher Check No. 116			5.71
State Department of Health			
To reimbursement for express, telephone, telegrams, for Journal		5.71	
May 31—Voucher Check No. 117			555.75
The Times Journal Publishing Co.			
To 2,100 June issue, 71 pages		528.75	
To tabular work		10.00	
To 2 ads in red		17.00	
		555.75	

Voucher checks Nos. 118 through 173 amounting to: $1,510.00
Voucher checks Nos. 192 through 194 amounting to: 25.00
Voucher checks Nos. 200 through 206 amounting to: 110.00 are the amounts appropriated by the House of Delegates in session, October 6, 1943 to each county society to pay the dues of men in Armed Forces.

May 31—Voucher Check No. 118 — 5.00
Anderson County Medical Society, Lawrenceburg - for one member

May 31—Voucher Check No. 119 — 30.00
Barren County Medical Society, Glasgow - for six members.

May 31—Voucher Check No. 120 — 25.00
Bell County Medical Society, Pineville - for fivemembers

May 31—Voucher Check No. 121 — 15.00
Bourbon County Medical Society, Paris - for three members

May 31—Voucher Check No. 122 Boyd County Medical Society, Ashland - for thirteen members	65.00
May 31—Voucher Check No. 122-A Boyle County Medical Society, Danville - for five members	20.00
May 31—Voucher Check No. 123 Breathitt County Medical Society, Jackson - for two members	10.00
May 31—Voucher Check No. 124 Bullitt County Medical Society, Mt. Washington - for one member	5.00
May 31—Voucher Check No. 125 Caldwell County Medical Society, Princeton - for two members	10.00
May 31—Voucher Check No. 126 Calloway County Medical Society - for three members	15.00
May 31—Voucher Check No. 127 Campbell-Kenton County Medical Society, Newport - for thirty one members	155.00
May 31—Voucher Check No. 128 Clark County Medical Society, Winchester - for three members	15.00
May 31—Voucher Check No. 129 Cumberland County Medical Society, Burkesville - for one member	5.00
May 31—Voucher Check No. 130 Daviess County Medical Society, Owensboro - for six members	30.00
May 31—Voucher Check No. 131 Estill County Medical Society, Irvine - for one member	5.00
May 31—Voucher Check No. 131-A Fayette County Medical Society, Lexington - for four months	20.00
May 31—Voucher Check No. 132 Fleming County Medical Society, Flemingsburg - for two members	10.00
May 31—Voucher Check No. 133 Floyd County Medical Society, Weeksbury - for two members	10.00
May 31—Voucher Check No. 134 Fulton County Medical Society, Hickman - for four members	20.00
May 31—Voucher Check No. 135 Graves County Medical Society, Mayfield - for three members	15.00
May 31—Voucher Check No. 136 Green County Medical Society, Greensburg - for one member	5.00
May 31—Voucher Check No. 137	Void
May 31—Voucher Check No. 138 Harlan County Medical Society, Harlan - for eight members	40.00
May 31—Voucher Check No. 139 Harrison County Medical Society, Cynthiana - for three members	15.00
May 31—Voucher Check No. 140 Hart County Medical Society, Munfordville - for one member	5.00
May 31—Voucher Check No. 141 Henderson County Medical Society, Henderson - for one member	5.00
May 31—Voucher Check No. 142 Henry County Medical Society, New Castle - for two members	10.00
May 31—Voucher Check No. 143 Hopkins County Medical Society, Madisonville - for three members	15.00
May 31—Voucher Check No. 144 Jefferson County Medical Society, Louisville - for one hundred thirty five members	675.00
May 31—Voucher Check No. 145 Johnson County Medical Society, Paintsville - for three members	15.00
May 31—Voucher Check No. 146 Larue County Medical Society, Hodgenville - forone member	5.00
May 31—Voucher Check No. 147 Laurel County Medical Society, London - for one member	5.00
May 31—Voucher Check No. 148 Letcher County Medical Society, Whitesburg, - for seven members	35.00
May 31—Voucher Check No. 149 Lincoln County Medical Society, Hustonville - for three members	15.00
May 31—Voucher Check No. 150 Logan County Medical Society, Russellville - for three members	15.00
May 31—Voucher Check No. 151 McCreary County Medical Society, Stearns - forone member	5.00
May 31—Voucher Check No. 152	Void
May 31—Voucher Check No. 153 Marion County Medical Society, Lebanon - forone member	5.00
May 31—Voucher Check No. 154 Marshall County Medical Society, Benton - for two members	10.00
May 31—Voucher Check No. 155 Mason County Medical Society, Maysville - for one member	5.00
May 31—Voucher Check No. 156 Meade County Medical Society, Hardinsburg - one member	5.00
May 31—Voucher Check No. 157 Mercer County Medical Society, Harrodsburg - for four members	20.00
May 31—Voucher Check No. 158 Monroe County Medical Society, Tompkinsville - for one member	5.00
May 31—Voucher Check No. 159 Montgomery County Medical Society, Mt. Sterling - for two members	10.00
May 31—Voucher Check No. 160 Morgan County Medical Society, Cannel City - for two members	10.00
May 31—Voucher Check No. 161 Muhlenburg County Medical Society, Greenville - for two members	10.00
May 31—Voucher Check No. 162 Ohio County Medical Society, McHenry - for two members	10.00
May 31—Voucher Check No. 163	Void

May 31—Voucher Check No. 164			30.00
Perry County Medical Society, Hazard - for six members			
May 31—Voucher Check No. 165			25.00
Pike County Medical Society, Pikeville - for five members			
May 31—Voucher Check No. 166			5.00
Pulaski County Medical Society, Somerset - for one member			
May 31—Voucher Check No. 167			15.00
Scott County Medical Society, Georgetown - for one member			
May 31—Voucher Check No. 168			5.00
Simpson County Medical Society, Franklin - for one member			
May 31—Voucher Check No. 169			5.00
Taylor County Medical Society, Campbellsville - for one member			
May 31—Voucher Check No. 170			5.00
Trigg County Medical Society, Cadiz - for one member			
May 31—Voucher Check No. 171			10.00
Warren-Edmonson County Medical Society -for two members			
May 31—Voucher Check No. 172			5.00
Wayne County Medical Society, Monticello - for one member			
May 31—Voucher Check No. 173			15.00
Whitley County Medical Society, Williamsburg - for three members			
June 30—Voucher Check No. 174			106.65
P. E. Blackerby			
To June salary, Secretary		135.00	
Less Social Security tax for June	1.35		
Less Withholding tax for June	27.00	28.75	
		106.65	
June 30—Voucher Check No. 175			34.65
Elizabeth Lambert			
To June salary, Stenographer for Medico-Legal Committee		35.00	
Less Social Security tax for Jnne		.35	
		34.65	
June 30—Voucher Check No. 176			185.00
State Department of Health			
To services rendered for month of Jnne		185.00	
June 30—Voucher Check No. 177			81.00
Collector of Internal Revenue, Louisville			
To Withholding tax from April through Jnne, 1944 deducted from salary of P. E. Blackerby		81.00	
June 30—Voucher Check No. 178			10.20
Collector of Internal Revenue, Louisville			
To Social Security taxes from April 1 through June 30, 1944		10.20	
June 30—Voucher Check 179			8.20
Elva V. Grant			
To expense of trip to Lexington for 1944 annual meeting		8.20	
June 30—Voucher Check No. 180			8.00
John W. Scott, Lexington			
To expense Postgraduate Extension Course		8.00	
June 30—Voucher Check No. 181			8.00
Arthur Bach, Lexington			
To expense Postgraduate Extension Course		8.00	
June 30—Voucher Check No. 182			8.00
E. S. Maxwell, Lexington			
To expense Postgraduate Extension Course		8.00	
June 30—Voucher Check No. 183			8.00
Chas. N. McKinlay, Lexington			
To expense Postgradnate Extension Course		8.00	
June 30—Voucher Check No. 184			8.00
W. D. Reddish, Lexington			
To expense Postgraduate Extension Course		8.00	
June 30—Voucher Check No. 185			4.00
Hugo Polderman, Waverly Hills			
To expense Postgraduate Extension Course		4.00	
June 30—Voucher Check No. 186			26.76
Lonisville Postmaster			
To May Postage		26.76	
June 30—Voucher Check No. 187			50.00
Bowling Green Postmaster			
To postage for Journal		50.00	
June 30—Voucher Check No. 188			12.50
American Surety Company of N. Y., Louisville			
To premium on bond No. 433265K for Amplias W. Davis, M. D., Treasurer		12.50	
June 30—Voucher Check No. 189			12.56
Fred Haupt, Louisville			
To 1 design - Simpson		12.56	
June 30—Voucher Check No. 190			3.93
State Department of Health			
To reimbursement for express, telephone, telegrams for Journal		3.93	

June 30—Voucher Check No. 190-A			5.00
Charles K. O'Connell, Secretary of State, Frankfort			
To fee required for filing change in process agent for Kentucky State Medical Association		5.00	
June 30—Voucher Check No. 191			500.25
The Times Journal Publishing Co.			
To 2,300 July issue - 59 pages		488.75	
To 200 forms "The Technical Exhibits"		11.50	
		500.25	
June 30—Voucher Check No. 192			5.00
Harlan County Medical Society, Harlan - for one member			
June 30—Voucher Check No. 193			15.00
Campbell-Kenton County Medical Society, Newport - for three members			
June 30—Voucher Check No. 194			5.00
Pulaski County Medical Society, Somerset - for one member			
July 31—Voucher Check No. 195			106.65
P. E. Blackerby			
To July salary, Secretary		135.00	
Less Social Security tax for July	1.35		
Less Withholding tax for July	27.00	28.35	
		106.65	
July 31—Voucher Check No. 196			34.65
To July salary, Stenographer for Medico-Legal Committee		35.00	
Less Social Security tax for July		.35	
		34.65	
July 31—Voucher Check No. 197			185.00
State Department of Health			
To services rendered for month of July		185.00	
July 31—Voucher Check No. 198			150.00
Curtis & Curtis, Attorneys, Louisville			
To services, Jauuary 1 to July 1, 1944		150.00	
July 31—Voucher Check No. 199			27.36
Louisville Postmaster			
To June postage		27.36	
July 31—Voucher Check No. 200			5.00
Calloway County Medical Society, Murray - for one member			
July 31—Voucher Check No. 201			5.00
Fulton County Medical Society, Hickman - for one member			
July 31—Voucher Check No. 202			10.00
Graves County Medical Society, Mayfield - for two members			
July 31—Voucher Check No. 203			5.00
Perry County Medical Society, Hazard - for one member			
July 31—Voucher Check No. 204			60.00
Jefferson County Medical Society, Louisville - for twelve members			
July 31—Voucher Check No. 205			5.00
Nelson County Medical Society, Bardstown - for one member			
July 31—Voucher Check No. 206			25.00
Madison County Medical Society, Richmond - for five members			
July 31—Voucher Check No. 207			7.35
Woman's Auxiliary, Kentucky State Medical Association			
To 25 per cent commission on advertisement amounting to 29.40		7.35	
July 31—Voucher Check No. 208			25.25
Bush-Krebs Co., Louisville			
To 7 copper halftones of portrait of man		25.25	
Voucher Check No. 209			7.00
State Department of Health			
To reimbursement for long distance calls		7.00	
July 31—Voucher Check No. 210			666.50
The Times Journal Publishing Co.			
To 3,000 August Issue - 67 pages		642.00	
To 2 ads in red		17.00	
To inserts		7.50	
		666.50	
Aug. 31—Voucher Check No. 211			106.65
P. E. Blackerby			
To August salary, Secretary		135.00	
Less Social Security tax for August	1.35		
Less Withholding tax for August	27.00	28.35	
		106.65	
Aug. 31—Voucher Check No. 212			34.65
Elizabeth Lambert			
To August salary, Stenographer for Medico-Legal Committee		35.00	
Less Social Security tax for August		.35	
		34.65	
Aug. 31—Voucher Check No. 213			185.00
State Department of Health			
To services rendered for month of August		185.00	
Aug. 31—Voucher Check No. 214			600.00
The Times Journal Publishing Co.			
To account of September Journal		600.00	

NOTES ON SCIENTIFIC EXHIBITS A. M. A. CHICAGO, 1944

M. Casper, M. D.
Louisville

The exhibits were especially crowded from nine until five daily. More and more interest is being taken in the scientific exhibits, so that they are really becoming a postgraduate, refresher course. There is no other place for getting so broad a view of the progress of medicine.

Intestinal parasitic infestations in the State of Indiana (very similar to those of Kentucky): The survey was made according to the total infestations (checked by stool examinations) found in students at the University, in patients of the University Hospital, of the State Hospitals at Logansport and Evansville, in inhabitants of both the rural and urban areas of the State. The incidence, as was to be expected, was greater in the rural areas, and was surprisingly great in students who are residents of Indiana. Pin worm and whip worm were noticeably present in Marion County (Indianapolis), and amebae in Warwick (Evansville) and Clinton Counties. This well illustrated exhibition showed carriers and organisms under multiple microscopic pictures. The exhibit also contained charts in color to illustrate the life cycle of these infesting organisms. It was clear from this exhibit that intestinal parasites are still common, and must be diligently sought after and thoroughly eradicated before our population is healthy.

A South American exhibit from Brazil with photographs of skin diseases, especially facial skin diseases, showed what severe forms exist in foreign countries. The pictures would compare with similar ones from the very worst skin clinics in the slums of our large cities. The exhibit was instructive for comparative reasons.

Plasmodium falciparum: Microphotographs of lesions of various organs and pathology in the human being, duck, chicken, and monkey. Organs included brain, spleen, kidney, liver, lung, and blood vessels. The exhibit went well with the malarial exhibit. Malaria is likely to be more prevalent on soldiers returning home from malarial countries, and will thus be spread widely. The exhibit contained large, colored charts showing various forms of the plasmodium as an aid to microscopic diagnosis, together with instructions how correctly to make film and smear. There was also a series of pictures giving the life history of plasmodium in the Anopheles mosquito and in man. At this time, when we must be malaria-conscious, it is good to see continued improvement in the difficult microscopic detection of the disease.

Another exhibit went on to show the modern method of mosquito control, a splendid study for health officers, and, in fact, for all of us. Even now we still have malaria with us.

A new agent, fluorescein (resorcinolphthalein) is used to determine the adequacy of the circulation. This is introduced into the blood stream, radiated by a portable, inexpensive, long wave ultraviolet light. It is especially useful for checking peripheral circulation and in determining the necessity and location of amputation. To measure the degree of fluorescence a sensitive instrument called dermofluorometer has been devised. It is a photoelectric measuring instrument for the skin. This opens a new, practical, and thoroughly scientific field for accurate diagnosis. The apparatus is also useful in determining circulation in cardiac conditions, myxoedema, and toxic goitre, also to follow the effect of therapy in all these conditions.

The exhibit that perhaps received the most attention was the one on peptic ulcer and effect of caffeine on the stomach. We shall have to revise our teaching on caffeine, it seems. Formerly we gave it credit for causing nervousness, insomnia and irritable heart. Now we must add that it is a causative agent of ulcer of the stomach and duodenum in those persons susceptible to ulcer, and further aggravates ulcer after its appearance. Many experiments were performed to confirm this hypothesis. One notable one was carried out on a large series of cats. Caffeine given hypodermically caused ulcer in 40% to 50% of cases. Also, caffeine with histamine or alcohol prolongs and increases gastric acidity. Black coffee is twice as bad as that diluted with milk or even sugar. Of caffeine bearing agents black coffee contains the most caffeine, then Pepsicola, Coca Cola, and tea, Sanka being lowest in caffeine. Postum contains no caffeine at all.

For treatment of cardiospasm, a new rubber bag has been devised, which is attached to a two-way duodenal tube. After introduction the bag is inflated, then gradually withdrawn, while pressure is exerted dilating the canal, and overcoming the spasm. The pressure is kept up one hour, being maintained by a weight tied on the outer end of the duodenal tube, the patient lying comfortably on his side, semi-inclined. The exhibit also showed

the further use of the two-way tube for washing out the stomach or dilated esophagus.

Exhibit on spinal anesthesia: Successful spinal anesthesia affords operating conditions in the abdomen unexcelled by other methods. Spinal anesthesia for upper abdomen can be controlled. Popular objections to spinal anesthesia are: depression of circulation or respiration, inadequate anesthesia in extent or duration, psychic complex, patient awake. Most objections can be circumvented or nullified by experienced foresight and attention to detail. Headache occurs very rarely with spinal anesthesia. Modern technique and complications were listed. Spinal anesthesia should not be used unless intravenous fluids are immediately available, also oxygen, plasma or blood, and an experienced anesthetist should be present to watch the patient. (We still like spinal anesthesia after 44 years' use).

Therapeutic anesthesia: Hiccoughing is controlled by injecting the fourth cervical nerve at the transverse process with procaine. Procaine injections are also used for pain, diagnosis and prognosis; and many conditions are improved, disproved, or cleared up by this method. The second, third, and fourth lumbar vertebrae control thrombophlebitis. A mannikin showing many sites of injections for various diseases for which the method is indicated was part of the exhibit. It was very helpful and practical, especially valuable to rule out the malingerer, psychotic pains, neuroses and so on.

Sacral anesthesia: A large exhibit showed many sacrums, illustrating great variation in anatomy of the different sacrums, especially of the apertures. Sacral anesthesia will never be easy. The exhibit demonstrated why, though it is valuable and the safest of all. Many improvements in technique have been made, such as the flexible needle and nylon needle, regulation of dosage to height of desired anesthesia, and so on. In obstetrics, anesthesia is to be started as soon as labor begins. The exhibit showed many phases of labor, giving facial expressions of patients in various phases of the administration of the anesthetic. Sacral anesthesia substitutes rest and repose for fear of pain. The exhibit showed that some sacrums are not adapted to sacral anesthesia. 85%, however, have a large hiatus of the sacrum that makes it practical. Demonstration of its use was given.

Caution: Do not persist if it is difficult to introduce the needle, and always precede by use of local in the skin. In 90% of cases the superior pole of the gluteal fold is the guide to the hiatus. After introducing the needle, always aspirate. If you get spinal fluid (once in 200 cases), withdraw the needle and abandon the method on that particular case. Sacral anesthesia is very useful in cardiac cases, tuberculosis and pneumonia. X-ray of the needle in situ may help locate the opening. In bad cases you can give trial labor of two to six hours, and if delivery is impossible, proceed with Cesarean section under the sacral anesthesia. The method was shown with electric lighting of models in color. Backache from dilatation of the cervix is controlled by this anesthesia, also sensitive nerves without any motor nerve involvement. The exhibitor has done 162 Cesarean sections under continued caudal anesthesia. The exhibit gave comparative pharmacology: Ether is very dangerous to the baby; spinal and caudal anesthesia very much better for the baby than any other. With most of the other agents and methods, fetal anoxia carries a high mortality. Procaine produces in the mother a state of euphoria, a certain ecstasy like that from cocaine. In the exhibit lighting effects on the spine showed the height of different amounts of anesthetic agents from 10 to 60 cc. 20 cc. is administered for a normal, low anesthesia, which amount is to be increased for upper abdominal anesthesia. Spinal anesthesia can get to the brain, but caudal cannot.

The exhibit of progress of pedicle skin grafts had life-sized, colored, waxed figures, showing that better results are being obtained all the time. This method requires many stages and a long period of time, but has splendid results, and getting rid of defects justifies the tedious process.

Pernicious anemia and tumors of the stomach: The exhibit demonstrated a relationship and emphasized that all pernicious anemia cases should have frequent gastrointestinal X-ray examination, as pernicious anemia and tumors of the stomach, both benign and malignant, are associated in a large percentage of cases.

One exhibit dealt with rice diet for high blood pressure. The rice diet was given with fruit, vegetables, vitamins, and iron, water being eliminated. This looks as if it may have some practical value, and it is simplicity personified. Any patient can carry it out. The Chinese and Japanese live almost entirely on rice. Why couldn't we if it will control the syndrome of high blood pressure? Patients with

high blood pressure usually eat too much, and living on one simple article of food will cut down their ravenous appetite, because variety tends to increase appetite. The main thing about the rice diet is that no patient was injured from the diet, though it was carried on from four days to thirty months. Many patients' blood pressure came down promptly, and the symptoms were entirely relieved. Some of the cases in the series were far advanced, eighteen died from accidents of high blood pressure before treatment could be given a fair chance. The chief point in the theory is that it rests the kidneys and liver, which are often damaged and overworked in cases of high blood pressure.

BOOK REVIEW

MANUAL OF ROENTGENOLOGICAL TECHNIQUE—By L. R. Sante, M. D.. Professor of Radiology, St. Louis University School of Medicine, Radiologist to St. Louis City Hospital and St. Mary's Hospital, St. Louis. Tenth 1943 Edition Revised, 600 illustrations, 390 pages. Edwards Brockers, Inc., Ann Arbor, Michigan, Publishers. Price $5.50.

In the tenth edition of this book some sections have been revised and expanded and some illustrations have been added.

In view of the extensive use of this book by the Armed Forces of the United States a simplified rule for determining the technical factors used in roentgenography has been formulated and recorded upon a new anatomical chart inserted in the back of the book. While this may not always give the best roentgenograms, still it can be depended upon to consistently produce roentgenograms of good diagnostic quality.

All features contained in the previous edition have been continued in this issue.

For the roentgenologist, technical procedures which he must carry out which are not readily accessible elsewhere, are included.

For the technician this book continues to present the fundamental facts essential to a clear understanding of roentgenological technique.

The physics of magnetism and electricity; the principles involved in the production of X-rays and their physical properties are developed in a simple readily understandable manner; more than 100 standard positions for X-ray examinations are illustrated together with resulting roentgenograms.

Demonstrations and experiments, and questions have been introduced following each chapter to aid the student in the mastery of the subject matter.

A glossary of medical, physical and anatomical terms is added for the use of the technician and stenographer.

Two charts, one showing precise technical factors for roentgenography of all parts of the body, the other an anatomical chart showing the bony structures and points for centering for roentgen examination, are inserted in the back of the book.

This is a very valuable book for the X-ray student, the general practitioner and all those professions who use X-ray in their practice.

SMALL COMMUNITY HOSPITALS—By Henry J. Southmayd, Director, Division of Rural Hospitals. The Commonwealth Fund and Geddes Smith Associate. Published by The Commonwealth Fund, New York, 41 East 57th St., New York.

This book, published in response to many requests, tells what the Commonwealth Fund has learned about the construction, organization, and operation of small community hospitals in nearly twenty years' experience, during which it has helped to build such hospitals from Maine to Mississippi and Utah.

People interested in small hospitals—whether as citizens, physicians, or hospital administrators— will find here a frank discussion of the major questions such hospitals face: What communities should have hospitals? What area should a hospital try to serve? Who should run the hospital? How should it be staffed? Who should pay the bills? How can the hospital help its community to get better medical care?

The book lays stress on the hospital job rather than the hospital plant, but a chapter on building design, illustrated with diagrammatic plans, covers the broad architectural principles which have been tested in fourteen hospitals. On the functional side, the contributions of the board of directors, the medical staff, and the superintendent and her staff are discussed in sufficient detail to give the community just thinking about a hospital, or starting one, or trying to get better service from one already existing, a practical understanding of what it is all about.

MINOR SURGERY—Edited by Humphry Rolleston and Alan Moncrieff, published by the Philosophical Society, 15 East 40th St. New York. Price $5.00.

This small compact book, full of valuable information has for its contributors some of the best surgeons in England.

Many surgical procedures are given in detail with accompanying illustrations. Minor surgery is performed by the general practitioner in most cases and he should profit by having this volume on his desk for ready reference.

Kentucky Medical Journal

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NEXT ANNUAL MEETING LEXINGTON,
SEPTEMBER 18, 19, 20, 1944

COUNTY SOCIETY REPORTS

Daviess: The Daviess County Medical Society met at the Owensboro Country Club on Tuesday evening, June 13. This was a regular semi-monthly meeting and marked the final program until September. A delicious chicken dinner was served after which W. D. Smith of Nashville, (guest speaker) presented a paper on "Ulcerative Colitis." This was a very masterly paper and stimulated much interest and comment. J. H. Harrison opened the discussion. No new or unfinished business came up for consideration at this meeting. Regular meetings are now adjourned for the summer months.

Frank J. Condon, Secretary.

Jefferson: The Jefferson County Medical Society will begin their fall session on October 16th, and meetings will be held thereafter on every Third Monday of the month. During the year special meetings will be planned at the various cantonments surrounding Louisville, and dinner programs for the distinguished guests will be held during the year.

The University of Louisville School of Medicine through the Commonwealth Fund will bring visiting instructors who will give lecture series on their particular subjects, and the members of the Jefferson County Medical Society will be invited to attend these lectures, which begin the first week of November. The first series of lectures will be given by Dr. Carl V. Moore, Associate Professor of Medicine and Director of the Division of Hematology and Nutrition of the Washington University School of Medicine, St. Louis, and the second series by William F. Windle, Director of the Institute of Neurology of Northwestern University Medical School, Chicago.

Richard T. Hudson, Secretary

Scott: The regular monthly meeting of the Scott County Medical Society was called to order at the John Graves Ford Memorial Hospital by the President, Dr. L. F. Heath, with the following members present: Doctors Heath, Crutchfield, Ammerson, Roberts, Smith, Barlow, Allphin, Thurber and Johnson. Minutes of previous meeting read and approved.

Donald Thurber, director of the Scott County Health Unit, reported there had been one case of Polio in Scott County and that the patient has been sent to Louisville for treatment.

A round table discussion followed on the subject of Infantile Paralysis and the preventive measures we should take to prevent a further outbreak. It was then moved and seconded that the Physicians in Scott County be kept posted as to the situation and that they be notified of any further new cases. Carried.

Doctors Allphin and Barlow were appointed

to draw up resolutions of respect on the death of Dr. D. B. Knox, a former member of the Scott County Medical Society, offered the following resolution:

The Scott County Medical Society regrets the death of its member Dr. David B. Knox. The Society feels that its loss is inestimable and his knowledge and help in his long membership will be a great loss to its members. We wish to extend our sincerest regrets and sympathy to his family and order this Memorial to be spread upon the minutes of our Society and a copy be sent to the family.

Signed:
E. C. Barlow
W. S. Allphin

Moved and seconded that the resolutions be adopted. Carried. There being no further business the meeting adjourned to meet the first Thursday in September.

H. V. Johnson, Secretary

Union: The Union County Medico-Dental Society met in the office of the Union County Health Department at Morganfield, at 8 P. M. Tuesday, August 2, 1944. Medical films on Hemorrhoidectomy and Impotence were shown. It was decided to hold the next meeting of the society the first Tuesday night in October. A general discussion was held after the showing of the picture. Those present were: G. B. Carr, D. M. Sloan, C. B. Graves, H. B. Stewart, and Bruce Underwood. There being no further business the meeting adjourned.

Bruce Underwood, Secretary

NEWS ITEMS

Owing to the shortage of personnel, the Louisville Neuropathic Hospital, established since 1916 in Louisville, will suspend operations September First. This property has been leased to the Federal Housing Agency for the duration. Dr. W. E. Gardner who at one time was head of the sanitarium and also its Chief Consultant, will continue the private practice of Neurology and Psychiatry at 721 Brown Building, Louisville. Dr. W. E. Render will resume private practice.

Dr. Virgil Kinnaird, Lancaster, Councilor, Seventh District, has been appointed Commissioner for the Kentucky School for the Deaf, at Danville, by Governor Willis.

Dr. John K. Higgins, former resident of Louisville, died July 17, 1944 at Independence, Mo., where he lived for the past 30 years. He was a native of Owensboro and a graduate of the old Louisville Medical School.

Dr. Meredith Woodson Hyatt, age 77, and former County Health Officer of Washington County and a widely known physician, died August 9th. He was graduated from the University of Louisville School of Medicine and practiced medicine in Springfield for thirty years. He was a Captain, Medical Corps, World War No. I, and employed as a tuberculosis specialist by the United States Veterans Bureau.

Dr. J. M. Rees, Cythiana, has been notified his name is included in the 1944 edition of Who's Important in Medicine, a biographical encyclopedia of outstanding physicians, surgeons, medical educators and hospital administrators. Dr. Rees was born and reared in Harrison County. This national recognition is a well deserved honor.

The following members of the Bourbon County Medical Society are at present in military service: B. N. Pittinger, William Morgan and S. M. Rickman.

Dr. Isaac Hamilton Browne, 67, physician at Winchester for forty-five years and City Health Officer there for twenty-three years, died at the Veterans Hospital, Lexington, on June 19th.

Dr. Edward J. Myers, Louisville, 58, died August 8th after a long illness. He was a graduate of the University of Louisville School of Medicine and a member of his local and state societies.

Dr. A. B. McCarty, 67, practicing physician in Owensboro, died July 28.

The International Health Division of the Rockefeller Foundation announces the appointment of Dr. John A. Ferrell, who has been their Medical Director for years and so well known in Kentucky, as Medical Director of the John and Mary R. Markle Foundation. This Foundation allows aid to research in certain diseases and deficiencies of interest to the health authorities.

Dr. Irvin Abell, Brig. General Fred W. Rankin and Dr. S. I. Kornhauser have been appointed honorary consultants to the Army Medical Library, Washington, D. C., and will attend the general meeting in Washington October 5 and 6th.

The total number of Infantile Paralysis cases for the year in Kentucky is 472, of which 205 are in Louisville and Jefferson County.



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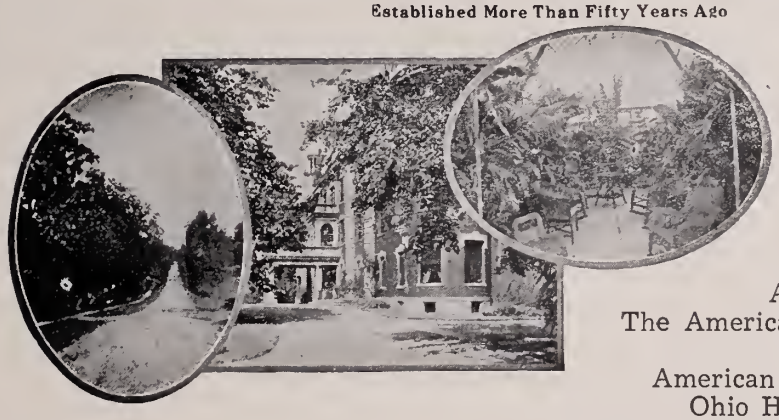
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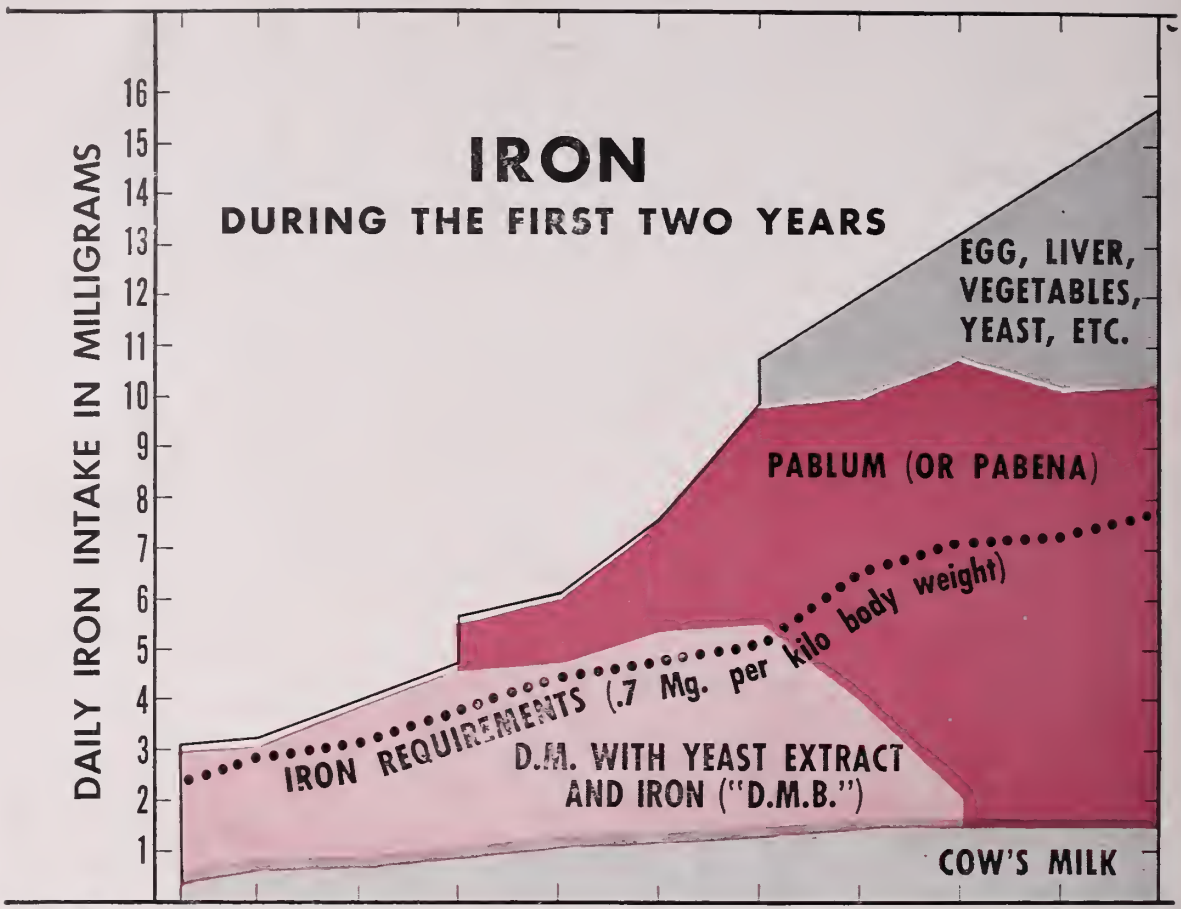
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KENTUCKY MEDICAL JOURNAL

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Editorial and Business Offices, 519 Tenth Street
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HARDY, A. V.; BURNS, W. and DE CAPITO, T.: Pub. Health Rep. 58: 689 (Apr. 30) 1943.

HARDY, A. V. and CUMMINS, S. D.: Pub. Health Rep. 58: 695 (Apr. 30) 1943.

HALL, W. W.: Am. Drug Mfgrs. Assoc., Annual Convention, Scientific Sec., Hot Springs, Va., May 1, 1944.

Annual Reports, U. S. Pub. Health Service, 1942-43, p. 122.

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Allen	A. O. Miller	Scottsville	October 25
Anderson	J. B. Lyen	Lawrenceburg	October 2
Ballard	E. H. Russell	Wickliffe	
Barren	C. R. Markwood	Glasgow	October 18
Bath	H. S. Gilmore	Owingsville	October 9
Bell	Edward S. Wilson	Pineville	October 13
Boone	R. E. Rule	Walton	October 18
Bourbon	D. B. Thurber	Paris	October 19
Boyd	Price Sewell, Jr.	Ashland	October 3
Boyle	P. C. Sanders	Danville	October 17
Bracken-Pendleton	W. A. McKenney	Falmouth	October 26
Breathitt	M. E. Hoge	Jackson	October 17
Breckinridge	J. E. Kincheloe	Hardinsburg	
Bullitt			
Butler	D. G. Miller, Jr.	Morgantown	October 4
Caldwell	W. L. Cash	Princeton	October 3
Calloway	J. A. Outland	Murray	October 5
Campbell-Kenton	Robt. L. Biltz	Newport	October 5
Carlisle	E. E. Smith	Bardwell	October 3
Carroll	H. Carl Boylen	Carrollton	October 10
Carter			October 10
Casey	Wm. J. Sweeney	Liberty	October 26
Christian	William F. Fidler	Hopkinsville	October 17
Clark	W. Carl Grant	Winchester	October 20
Clay	L. H. Wagers	Manchester	October 10
Clinton	S. F. Stephenson	Albany	October 21
Crittenden	C. G. Moreland	Marion	October 9
Cumberland	W. F. Owsley	Burkesville	October 4
Daviess	Frank J. Condon	Owensboro	October 10 & 24
Estill	Virginia Wallace	Irvine	October 11
Fayette	Chas. D. Cawood	Lexington	October 10
Fleming	Roy Orsburn	Flemingsburg	October 11
Floyd	Robert Sirkle	Weeksbury	October 25
Franklin	E. K. Martin	Frankfort	October 5
Fulton	John G. Samuels	Hickman	October 11
Gallatin	J. M. Stallard	Sparta	
Garrard	J. E. Edwards	Lancaster	October 19
Grant			October 18
Graves	H. H. Hunt	Mayfield	October 3
Grayson	E. B. Deweese	Caneyville	
Green	S. J. Simmons	Greensburg	October 2
Greenup	Virgil Skaggs	Russell	October 13
Hancock	F. M. Griffin	Hawesville	
Hardin	D. E. McClure	Elizabethtown	October 12
Harlan	W. R. Parks	Harlan	October 21
Harrison	W. B. Moore	Cynthiana	October 2
Hart	Vincent Carrao	Munfordville	October 3
Henderson	Walter L. O'Nan	Henderson	October 9 & 23
Henry	Owen Carroll	New Castle	October 12
Hickman	H. E. Titsworth	Clinton	October 5
Hopkins	Wm. H. Garnier	Madisonville	October 12
Jefferson	Richard T. Hudson	Louisville	October 2 & 16
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Johnson	Paul B. Hall, Act. Sec.	Paintsville	October 23
Knox	T. R. Davies	Barbourville	October 19
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Lawrence	L. S. Hayes	Louisa	October 16
Lee	A. B. Hoskins	Beattyville	October 14
Letcher	Owen Pigman	Whitesburg	October 31
Lewis	Elwood Esham	Vanceburg	October 16
Lincoln	Lewis J. Jones	Houstonville	October 20
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Logan	E. M. Thompson	Russellville	
Lyon	H. H. Woodson	Eddyville	October 3
McCracken	Leon Higdon	Paducah	October 25
McCreary	R. M. Smith	Stearns	October 2
McLean	F. L. Johnson	Livermore	October 12
Madison	Charles J. Grubin	Richmond	October 19
Magoffin	Lloyd M. Hall	Salyersville	

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Menifee			
Mercer	J. Tom Price	Harrodsburg	October 10
Metcalfe	E. S. Dunham	Edmonton	October 3
Monroe	Corinne Bushong	Tompkinsville	
Montgomery	D. H. Bush	Mt. Sterling	October 10
Muhlenberg	E. L. Gates	Greensville	October 10
Nelson	W. Keith Crume	Bardstown	
Nicholas	T. P. Scott	Carlisle	October 16
Ohio	Oscar Allen	McHenry	October 4
Owen	K. S. McBee	Owenton	October 5
Owsley	W. H. Gibson	Booneville	October 2
Perry	J. P. Boggs	Hazard	October 9
Pike	S. B. Casebolt	Pikeville	October 5
Powell	I. W. Johnson	Stanton	October 2
Pulaski	Robt. G. Richardson	Somerset	October 12
Robertson	L. T. Lanham	Mt. Olivet	
Rockcastle	Robt. G. Webb	Livingston	October 6
Rowan	I. M. Garred	Morehead	October 9
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Scott	H. V. Johnson	Georgetown	October 5
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Union	E. Bruce Underwood	Morganfield	October 3
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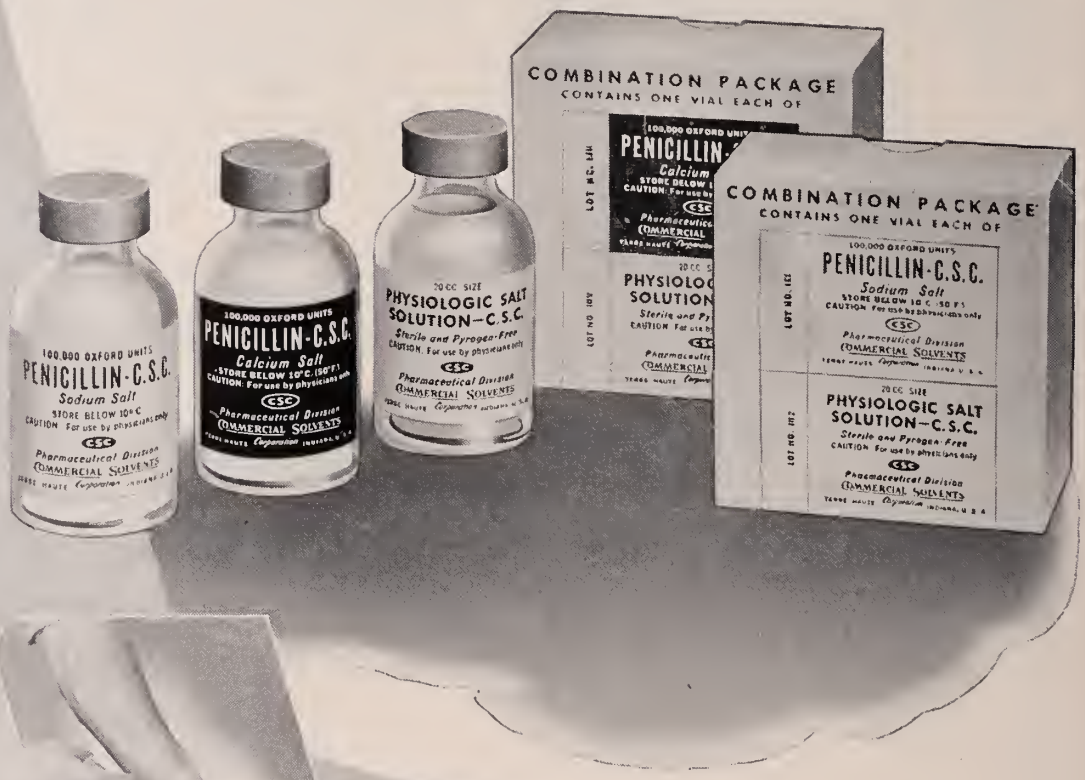
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The physiologic salt solution is sterile and free from fever-producing pyrogens. Penicillin-C.S.C.—whether the sodium salt or the calcium salt—is bacteriologically and biologically assayed to be of stated potency, sterile, and free from all toxic substances, including pyrogens, as attested by the control number on the package.

When 20 cc. of the physiologic salt solution is withdrawn from its vial, and injected into the penicillin-containing vial under the usual aseptic precautions, the resultant solution presents a concentration of 5000 Oxford Units per cubic centimeter. The solution is then ready for injection, does not require resterilization.

After the desired amount of the solution for the first injection has been withdrawn, the vial containing the remainder of the solution should be stored in the refrigerator. It is ready for the next injection—the desired amount then merely has to be withdrawn under proper sterile technic.

When released for unrestricted marketing, Penicillin-C.S.C. will be stocked throughout the United States by a large number of selected wholesalers. Any pharmacist thus will be able to fill professional orders promptly.

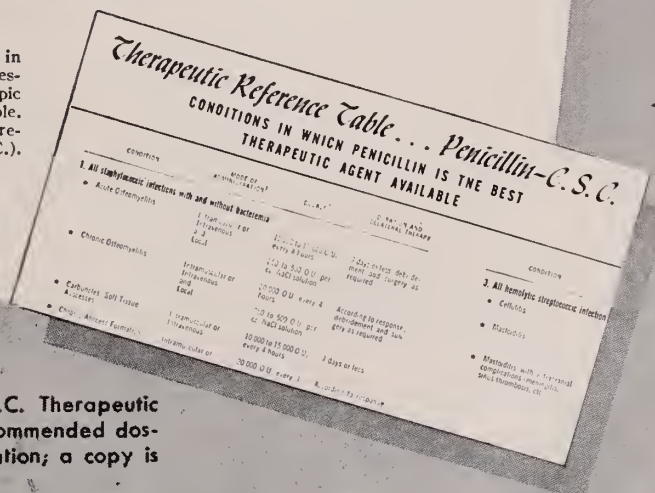
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*Penicillin calcium, equal to penicillin sodium in therapeutic efficacy and nontoxicity, in recent investigations has been shown to be less hygroscopic than the sodium salt, and somewhat more stable. Both forms of the drug should be stored in the refrigerator, at a temperature not over 50° F. (10° C.).


Therapeutic Reference Table . . . Penicillin-C.S.C.
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A page of the "Penicillin-C.S.C. Therapeutic Reference Table," showing recommended dosages and modes of administration; a copy is yours for the asking.



IN WOMEN, in whom breast feeding is undesirable or contraindicated, the early administration of Diethylstilbestrol provides an effective means of preventing the development and minimizing the intensity of breast pain. This simple procedure eliminates the use of breast binders, ice bags, restriction of foods and use of saline catharsis.

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Most physicians who have discovered the value of this hormonal treatment of engorged breasts find it most satisfactory.

Diethylstilbestrol Squibb is available in 5-mg. tablets which are particularly useful for the treatment of this condition. The synthetic estrogen is available in a variety of other dosage forms for oral, intravaginal, or parenteral administration. Not the least among the advantages of Diethylstilbestrol is its low cost.

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KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KEN TUCKY STATE MEDICAL ASSOCIATION

Published Under the Auspices of the Council

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DEFERMENT OF PREMEDICAL STUDENTS

The National Selective Service in April, 1944 abolished all future deferments of premedical and medical students not enrolled in college by July 1, 1944, thereby limiting the enrollment of students to women and to men physically disqualified for military service (4-F). It may be said, without fear of contradiction that, in such circumstances, it will be almost impossible, in the near future, to provide the required annual quota of physicians necessary for the essential medical care to the civilian population.

Many of the State Medical Associations have already passed strong resolutions protesting this action and attention is now being called to the fact that a bill, known as the "Miller Bill" (HR 5128), has been introduced in Congress which would so amend Section 5 of the Selective Training and Service Act of 1940, as to make provision for deferment of a stipulated number of students annually to study medicine as defined in said amendment. It is conceded within the profession that this is a very urgent matter and that every support possible should be given on behalf of the passage of this bill. It is hoped that our doctors in Kentucky will urge upon their Congressmen and Senators their active efforts in securing the passage of the bill. In writing to your Congressman or Senator, always refer to HR 5128.

CANCER CONTROL PROGRAM RECOGNIZED

The Kentucky General Assembly, at its 1944 Session, included in its Appropriation Act an annual appropriation of $15,000 for each of the next two years, with the stipulation that these funds be made available to the State Department of Health for use in connection with the program of the Kentucky Women's Field Army and the Kentucky Division of the American Society for the Control of Cancer. Dr. Guy Aud, Louisville, is Chairman of the Executive Committee of the Kentucky Division and, since the appropriation was made, has held several meetings with the State Health Commissioner and the General Chairman of the Kentucky Women's Field Army for the purpose of setting up plans for using the funds.

Prior to this appropriation, diagnostic cancer clinics were established in Louisville, Lexington and Middlesboro and have, under good medical control, operated quite satisfactorily, accomplishing a great good in behalf of many indigent persons suffering from cancer. The Campbell-Kenton County Medical Society has authorized the establishment of a diagnostic cancer clinic at the Booth Memorial Hospital in Covington, in collaboration with other hospitals, and consideration is now being given by local societies for the establishment of similar diagnostic clinics at Paducah, Owensboro and Ashland. All of these clinics, when organized and in complete operation, must conform to standards set up by the American College of Surgeons, which is the national sponsoring agency. Similar programs are being conducted in a number of other States, with both voluntary and public support.

Applications for admission to the diagnostic clinics and for subsequent treatment, either ambulatory or in hospitals, must have the approval of local boards of health as to the economic status of the persons applying—this, to determine indigence. The Advisory Committee of the State Medical Association reported to the 1944 Session of the House of Delegates all the circumstances connected with the development of this cancer program. Funds appropriated by the General Assembly are made available for the payment of hospital services of patients who remain in affiliated hospitals for treatment.

The medical profession, in endorsing this program and in sponsoring the clinics, justly deserves the commendation and support of the general public.

THE SOUTHERN MEDICAL

The Annual Meeting of the Southern Medical Association this year will be held in St. Louis, November 13-16. In addition to the programs of the Association's twenty sections, which will run concurrently, there will be programs by the organizations meeting conjointly with the Association: American College of Chest Physicians, Southern Chapter; American Society of Tropical Medicine; American Public Health Association, Southern Branch, and the National Malaria Society.

This year's meeting should be one of the best and most productive in the history of the Association. Many new problems in the dissemination of disease, created or intensified by global warfare, will be discussed by speakers speaking from practical experience as well as from extensive research. Particularly is this true of tropical and exotic diseases which, if introduced in this country, would find the south an especially fertile field for development and dissemination.

All meetings and exhibits, except the public sessions at night, will be held at the Municipal Auditorium. This means that all meetings will be under one roof, which will be an enormous convenience for those taking part in the programs or interested in the exhibits.

All members of the State and County medical societies are cordially invited to attend. Hotel reservations and transportation should be secured as early as possible. For hotel reservations address The Hotel Committee, Southern Medical Association, 901 - Syndicate Trust Building, St. Louis 1, Missouri. For more detailed information of this great war-time meeting, consult advertisement on page XVII in this issue of the Journal.

INTERNATIONAL MEDICAL ASSEMBLY

The International Medical Assembly, otherwise called a post-graduate school, Inter-State Medical Association of North America, will meet in Chicago October 17-20, at the Palmer House as headquarters. Brigadier General Fred W. Rankin, Lexington, is the President of this Association. Many other distinguished men occupy important offices.

Special emphasis will be given to the medical problems of the Armed Forces and of civilians, occasioned by the war. The Association will present the latest dependable technical medical information by experts.

For further information regarding this meeting, please write to the General Chairman, Dr. Joseph J. Moore, President Chicago Medical Society, Chicago.

A KENTUCKIAN HONORED

Brig. General E. E. Hume, was awarded the Oak Leaf Cluster to the Distinguished Service Medal in recognition of service as chief of the Allied Military Government Section, Fifth Army, Italy. The citation read:

"As Chief of the Allied Military Government Section, he successfully carried out one of the most extensive military tasks ever accomplished by the United States, being charged with the government of Campania, a region of 6,000,000 inhabitants including Naples. Despite the enormous handicaps where the Germans had destroyed all public utilities, mined buildings, despoiled hospitals, and paralyzed the civil administration, he was able by his unusual ability to return the city's functions to normal in a few weeks. A threatened epidemic of typhoid and typhus was prevented by his wise preventive measures."

He is a brother of Mrs. Eleanor Hume Offutt, President of the Woman's Auxiliary, a son of the late Dr. E. E. Hume, Frankfort, and nephew of John G. South, former President of our Association.

CURRENT COMMENTS

The Academy of Medicine of Cincinnati, Ohio, extends to all Kentucky physicians an invitation to attend its meetings from September 19, 1944 through May 15, 1945, and has transmitted to the editor the following meeting dates with speakers and subjects assigned.

It goes without saying that any Kentucky physician will be privileged to attend, and will have opportunity to hear some of the most distinguished physicians of this country.

Academy of Medicine Program
1944 - 1945

1944

September 19—Annual Meeting—President's Address.

October 3—Dr. Chester S. Keefer, Professor of Medicine, Boston University, School of Medicine, Boston. "Penicillin."

October 17—Dr. Lawrence Kubie, Associate Psychiatrist, Mt. Sinai Hospital, New York. "Psychotherapy in Medical Practice."

November 7—Dr. Herbert C. Maier, Instructor in Surgery, Columbia Uni-

versity, New York. "Surgical Treatment of Pulmonary Suppuration."

November 21—Dr. Shields Warren, Assistant Professor of Pathology, Harvard Medical School, Boston. "The Early Diagnosis of Cancer."
Joint Meeting with the Cancer Council.

December 5—Dr. Eugene Stead, Jr., Professor of Medicine, Emory University, Atlanta. "Mechanism and Treatment of Shock and Circulatory Collapse."
Joint Meeting with the Heart Council.

December 19—Dr. Frederick C. Irving, Professor of Obstetrics, Harvard Medical School, Boston. "Cesarian Section."

1945

January 2—Dr. Otto Engleke, Health Commissioner, Ann Arbor, Michigan. "The Relations between the Health Department and the Doctor."

January 16 and 17—The B. K. Rachford Lectures by Dr. Alvin Coburn, Lt. Commander, (MC) USNR. Assistant Professor of Medicine, Columbia University, New York. "Therapy and Prevention of Rheumatic Fever."

February 6—Dr. Merrill C. Sosman, Clinical Professor of Roentgenology, Harvard Medical School, Boston. "X-ray Diagnosis."

February 20—The Roger Morris Lecture by Dr. George Heuer, Professor of Surgery, Cornell University, New York.

March 6—Dr. R. H. Williams, Assistant Professor of Medicine, Harvard Medical School, Boston. "Thiouracil in the Treatment of Hyperthyroidism."

March 10—Program to be arranged by the Nutrition Council.

April 3—Nominating Night. Dr. Katherine Dodd, Associate Professor of Pediatrics, University of Cincinnati, College of Medicine. "Cystic Fibrosis of the Pancreas."

April 17—Dr. Edwin P. Lehman, Professor of Surgery, University of Virginia, Department of Medicine, Charlottesville. "Diagnosis and Treatment of Intestinal Obstruction."

May 1—Dr. Ovid O. Meyer, Associate Professor of Medicine, University of Wisconsin Medical School, Madison. "The Therapeutic Use of Anticoagulants Including Heparin and Dicoumarol."

May 15—Election Night. Lt. Col. Roy Grinker M. C. A. A. F., Director of Professional Services and Psychiatry. "The Medical, Psychiatric and Social Problems of War Neuroses."

PRESIDENT'S ADDRESS

SOME ASPECTS OF THE TUBERCULOSIS PROBLEM

Oscar O. Miller, M. D.

Louisville

Modern medicine begins with the opening of the 19th century and its divorcement from theological dogma and metaphysical speculation. It, however, was still hampered by sterile theorizing till the middle of the century.

In regard to tuberculosis we may consider the modern period as beginning with the great French clinician, Laennec, and the publication of his treatises on auscultation (1819) which enabled the physicians of his day to separate the five major diseases of the chest. This was followed by Louis' great work on phthisis in 1825. Louis' founding of medical statistics[1] annihilated many of the theories and dogmas of his day. Villemin's animal experimentation in 1865 forced upon an incredulous profession the idea of the infectiousness of tuberculosis and a living virus, a concept which could not be accepted by the profession of that day who had been nurtured on the doctrine of inherited vice or constitution as the causative factor in tuberculosis. Twelve years later (1877) it won universal acceptance by the brilliant work of Cohnheim, to be followed in five years by the discovery of the tubercle bacillus (1882) by the genius of Koch. New ideas are but slowly assimilated; the ravages of a disease that has taken a toll of one tenth of all the millions of white men born into the world, must, of necessity, force itself upon the attention of physician and laity alike, once the causative factor is found. A disease recognized only in the far advanced stages at the beginning of the century, and with a termination of such universal finality, arrested attention and demanded that something be done about it.

The sanatorium movement was already under way. Hermann Brehemer[2] was first in the field in 1859 in the Waldenburg mountains of Silesia; Carl Spengler at Davos, Switzerland and Edward L. Trudeau (1884) at Saranac, New York. In England nineteen hospitals were in existence for consumptives by 1886. American medicine received its impetus from the men who had studied abroad and who, on returning to America, introduced continen-

Read before the Kentucky State Medical Association, Lexington, Sept. 18, 19, 20, 1944.

tal methods in teaching and in practice, in the schools and in the hospitals. National tuberculosis societies had been formed in Europe. In due time such an association was conceived and formed in America under the name of "The National Association for the Study and Prevention of Tuberculosis," the first meeting being held in Atlantic City in June, 1904[3]. Men such as Osler, Welch, Flick, Trudeau, Biggs, Sternberg and Jacobs were associated with the movement; in fact, drew up the constitution for the society. The thirty members of the first board of directors, selected from the country at large, included the most outstanding members of the profession.

The development of the tuberculosis movement in Kentucky begins with the formation of the Louisville Anti-tuberculosis Association, June 8, 1905[4] under the aegis of Dr. J. A. Flexner, ably assisted by Dunning S. Wilson[5] who had called attention to the need in May, 1904. Robert Worth Bingham was chairman of the first meeting, and it was he who drew up the constitution and by-laws. To Mr. W. C. Nones, the first president, we owe much for the major accomplishments of the organization.

The Louisville association conducted a tuberculosis clinic and employed the first visiting nurses for tuberculous cases. The association felt it was incumbent on them to open a sanatorium to demonstrate to public and victim alike that tuberculosis was curable. This was proposed by Mr. W. C. Nones September 5, 1905. It was not until 1907 that this was consummated. The old Bergman home was purchased at Hazelwood, and it became known as "Hazelwood Sanatorium," with a capacity of 10 beds. Later four cottages were constructed, raising the capacity to forty-five, for the care of what then was called incipient cases, and which today we would know as moderately advanced and far advanced stages of the disease. The patients at this time were placed on open porches exposed to the inclemencies of the weather. It was here in June, 1911, as resident physician that I became indoctrinated in the care and treatment of tuberculosis.

The association was instrumental in passing the legislation that enabled cities of the first class to construct sanatoria, conduct clinics, and make appropriations for their maintenance in the sum of not less than one half cent or more than two cents. In 1907 Mayor Paul C. Barth, in conformity with the new legislation, appointed the first board and levied the minimum tax of one half cent for the purposes of the act. When sufficient funds had accumulated a site was purchased, buildings erected, and Waverly Hills Sanatorium opened July 26, 1910. A new fireproof building was constructed and opened in August, 1926, and additions made in 1933 and 1942 with a capacity of 500. Meanwhile Lexington entered the field through the influence of that splendid civic-minded woman, Mrs. Madeline McDowell Breckinridge [6], who had presented the subject to the Civic League in 1904 and again more formally November 20, 1905, which resulted in the formation of an association December 17, 1905 that later (1910) became known as the Fayette Tuberculosis Association. Blue Grass Sanatorium was opened August 27, 1917; it later became known as the Julius Marks Sanatorium.

In September, 1909, the Kentucky Association for the Prevention and Relief of Tuberculosis was organized in Louisville through the efforts of the local association. A full-time secretary was employed for the educational work and for the formation of associations in the various towns in the state, with the assistance and cooperation of the State Board of Health.

On June 12, 1911 a railroad car, loaned by the L and N Railroad and traveling free over all the state lines, was equipped as a traveling exhibit on tuberculosis and sent out over the state. By this means and by lectures and moving pictures the people of the state were gradually informed of the ravages of tuberculosis. In 1912 an act was passed creating a commission known on the Kentucky Board of Tuberculosis Commissioners[7], which in part says:

"to make an appropriation therefor, and to authorize and provide for the establishment of districts consisting of one or more than one county and to authorize and provide in such districts for the location, erection, organization and management of a district sanatorium for the care and treatment of tuberculosis, and authorizing county and district taxation for the purpose of making an appropriation for the purchase of necessary land and construction and equipment of necessary buildings and an annual appropriation for the maintenance of such sanatoria."

The Board had its first meeting June 20, 1912 at which time Governor James B. McCreary was elected president; no ap-

propriation was forthcoming, and the work was carried on by the Commissioners at their own expense until March, 1913, when an appropriation was made. This Commission conducted the educational work in the state. On January 6, 1906 a bill[8] was drawn by the Lexington association for a state sanatorium and was presented in the state legislature. It passed the Senate, but was defeated in the House due to the influence of Governor Beckham. This bill was reintroduced in 1908, asking for a larger appropriation, was passed by the legislature, only to be vetoed by Governor Wilson.

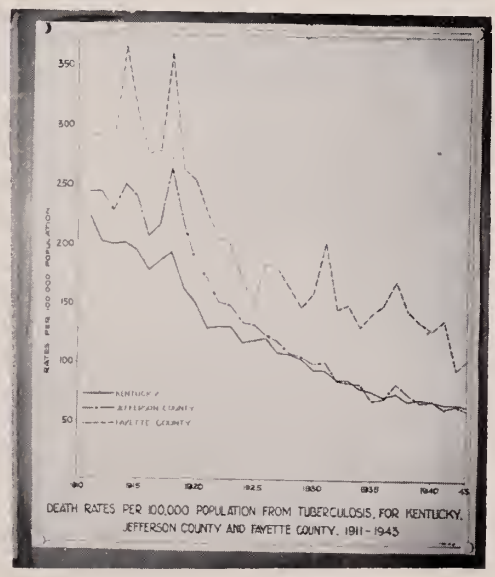
The history of the tuberculosis movement is fraught with delays, disappointments, and heart-breaking arduous tasks. This, in brief, is the history of the inception of the tuberculosis movement in Kentucky. From the parent organizations stemmed many local associations throughout the state, sponsored by the civic leaders of their respective communities. Their work was no less important than that of those who played the stellar roles; their griefs and disappointments no less poignant than those of the individuals who met the major crises. They are the unsung heroes and heroines of an earlier day, who fought in the front ranks against a dread disease, the final chapter of which has not yet been written.

In 1920 Hazelwood Sanatorium, after a precarious existence and many trials and tribulations, was given to the state outright, providing it assumed the bonded indebtedness of some $25,000 and continued to operate it as a sanatorium. Additions have been made to it from time to time, and a new building of 230 bed capacity will be completed in 1945. Today the bed capacity for tuberculosis in the state of Kentucky, including those in penal institutions and asylums is 1132[9]. The accepted minimum standard is two beds per death, which would require 3640 beds. This is a deficit of 2500 beds. To this should be added an estimated 500 new cases found by Selective Service and in need of hospitalization, making a total of 3000. The construction of five 100 bed state sanatoria will reduce this to a bed deficit of 2500 and will give the state about one bed per death.

This association has taken a creditable part in organizing an adequate program for the control of tuberculosis through your Committee on Medical Economics, who went on record at the ninety-third annual session October 5, 1943 authorizing the committee to appear before the state legislative council for passage of a bill to create[10] "two additional adequate modern and well-equipped institutions"—one for eastern and one for western Kentucky; to be placed under the control of the State Commissioner of Health and a committee selected by the House of Delegates. In 1944 at the regular session of the General Assembly of the Commonwealth of Kentucky, House Bill 147 was introduced and passed through the efforts of this committee, your past president, E. M. Howard, and the untiring and unremitting efforts of the chairman of the Medical Economics Committee, C. C. Howard, to whom is due much of the credit for the passage of the bill.

One of the astounding phenomena of the 19th and 20th century is the decline in the tuberculosis death rate. Some have thought that this was precipitated by the discovery of the tubercule bacillus and the common knowledge that it was an infectious disease, but the decline had already set in prior to this. It was evident in England in 1801. Following the pandemic influenza in 1918, it became precipitous and has continued somewhat abated since, with a tendency for the curve to flatten out and, from time to time, to show slight upward peaks due to environmental and economic factors and those rare occasions of a national cataclysm. Tuberculosis follows the same epidemiological curve that other infectious diseases follow, except that no one lives long enough to see its completion in tuberculosis.

There are many factors operating in this



DEATH RATES PER 100,000 POPULATION FROM TUBERCULOSIS, FOR KENTUCKY, JEFFERSON COUNTY AND FAYETTE COUNTY, 1911-1943

decline. Certainly there is no lessening in the virulence of the tubercle bacillus, notwithstanding the fact that it may be dissociated into S and R types, the latter being non-virulent, and the S type highly virulent. The fact that tuberculosis is increasing in certain countries testifies to this. In Sweden the epidemiological curve of tuberculosis may be observed in the last one hundred years. The wave has spread from the more populous areas in the south to the rural north where the rate is much higher in the rural areas than in the cities. The same reversal is observed also in Norway in the past thirty years. In fact, the same phenomenon is occuring in the United States. The rural areas that formerly had a lower rate than the cities now have a higher rate. The amelioration of social conditions has been a potent factor in the decline of tuberculosis, just as the rapid industrialization with its attendant ills was the chief factor in its rise. Poverty and tuberculosis go hand in hand.

The decline in tuberculosis mortality was well in evidence in Kentucky long before any concerted attack was made against it, and this was one of the arguments used for not diverting funds for its control earlier. Louisville has had facilities for the control of tuberculosis for thirty years, and yet the mortality rate is not any lower than the state rate as a whole, while Lexington has a considerably higher rate in both white and colored, according to the available statistics for 1942.

If one does not strain the point too much, adequate hospital facilities for the care of the tuberculous and their temporary isolation must be conceded as one of the lesser factors in the decline in the mortality rate. Compulsory isolation has been effective in controlling leprosy, a disease not nearly as infectious as tuberculosis. When one discusses the inheritance of acquired characteristics, he is on debatable ground. None the less, the fact is inescapable that the non-resistant stock has died off, leaving the resistant individuals to propagate the species. This inheritance of an acquired immunity is manifest at present. It is rare to see phthisis florida or galloping consumption in white native stock today; it was not uncommon thirty years ago. The Hebrew's resistance and the Negro's vulnerability to tuberculosis are well known. The Negro is slowly building up an immunity to tuberculosis genetically by racial intermixture and also by acquired immunity. The only immune individual is a tuberculous individual. The primary infection that most of us receive sensitizes us and produces a relative immunity. Exogenous reinfection had its day; but I believe that to-day, those who are entitled to an opinion would reaffirm endogenous reinfection as the chief role in the evolution of phthisis.

The pre-induction X-ray examination of selectees was the greatest screening project yet undertaken and was responsible for the elimination of all those with manifest tuberculosis either healed or active. In consequence the record for tuberculosis in the Armed Forces is exceptionally good; the admission rate so far is 0.12% whereas in World War I the admission rate was 1.2%. All that an X-ray examination could say of the negative case was that he was free of tuberculosis at the time of his induction; his future fate remains to be seen. Re-X-ray of the chest as contemplated at the time of discharge will give us an appraisal of the effects of war on tuberculosis; and it will afford us an unparalleled opportunity to evaluate the hypothesis that those with more than the allowable amount of calcification were liabilities rather than assets. It is to be hoped that the low incidence in the Army will continue; the future will determine whether this represents a lag, and whether we may expect an increase toward the end of the war.

With the decline in the death rate from tuberculosis the opportunities for infection are lessening. Thirty years ago in conjested areas tuberculous infection in adults was universal. Today the doctrine of universal infection is no longer tenable. About 48% of the medical students entering the University of Louisville have negative tuberculin tests, and Minnesota is beginning to accredit its counties similar to the method of accrediting dairy herds; by the low incidence of tuberculosis infection in the population as revealed by the tuberculin test. It is manifest then that the decline in tuberculosis has come about by natural causes and, in its downward trend, it may reach an arbitrary minimum. It is reasonable to believe that with modern methods we can force the decline much lower and more precipitately than would occur by natural means. In fact, we have sufficient knowledge today, if used drastically, to eradicate the disease.

What are the special needs in Kentucky in regard to tuberculosis? First, we must

know its hiding and abiding places, and that means an intensive case finding program. Since 1937 the state health department has been exploring the field in a limited yet creditable manner. In 1920 there were 3,644 deaths from tuberculosis in Kentucky, a rate of 150.2 per one hundred thousand population. During the same year 1200 cases were reported to the Health Department as having the disease. In 1943 there were 1641 deaths from tuberculosis and 2,402 cases were reported. In other words, the death rate declined 60% and case reporting improved 100%. Intensive case finding by means of the miniature photofluorographic film is inexpensive and effective. It finds the latent cases, for tuberculosis has an asymptomatic period of one to two years, during which it gradually invades more and more tissue before making its presence known. This is the period when most may be done for the patient and his contacts.

The program should find an added stimulus with the prospect of five additional sanatoria for the care of patients uncovered by the survey. Each of these sanatoria should be diagnostic and case finding centers for their respective areas, all thoroughly integrated with the central office of control. The plan calls for 50% of the beds to be free. I am convinced that an adequate program requires all the beds to be free, except that persons able to finance their own hospitalization may be admitted and charged the per diem cost when vacancies occur. The local boards governing each of the sanatoria are likely to be put under considerable pressure to admit patients with chronic ailments other than tuberculosis such as pulmonary abscess, bronchiectasis, asthma, chronic bronchitis, and senility with healed minimal tuberculous lesions. It is just as necessary for an institution to establish a reputation for good and effective work as it is for an individual. To make it the repository of hopeless terminal stage cases, and other chronic pulmonary lesions is to blast it at its birth. Since the bill provides for physicians in charge with at least five years experience the decision of admittances should be left exclusively to them.

In 1943 there were 1641 deaths from tuberculosis in the state of Kentucky. It is usually estimated that for each death there are five active cases in the population. This would give a total of 8305 cases needing hospital or supervisory care. In the early phases of Selective Service, using the 35 mm. photofluorographic unit, I found 1.1% of the selectees showing evidence of significant pulmonary tuberculous infection. If we assume that one third of the population of the state of Kentucky represents adults, then we may estimate that 1% should show evidence of definite tuberculosis, which would amount to 9,182 individuals. Dempsey[9] estimates that 120,000 cases have been uncovered in the U. S. due to Selective Service X-ray examinations and that one sixth of these represent moderately and far advanced stages of the disease.

It would seem that a well integrated attack on the disease in Kentucky would require a state committee on tuberculosis with a Medical Director employed thereby and other technical staff, to organize clinics and institute photofluorographic X-ray examinations of large sections of the population. The formation of a travelling pneumothorax clinic for induction of pneumothorax on suitable cases pending their hospitalization would prevent many cases from becoming advanced while waiting for vacancies at sanatoria. Such a travelling clinic would be in a position to instruct some of the local private physicians in the proper conduct of such cases and to act as a consultation service. Many favorable cases could thus be brought under control and their hospitalization obviated. It is well known that the insane and feeble-minded are peculiarly prone to develop tuberculosis; in fact, 20% of the deaths occuring in Kentucky asylums are due to this cause. Here is a definite need for consultation service and the institution of proper methods of control, which such a committee, through its Medical Director, would be in a position to furnish. A like service is probably needed in goals and corrective institutions. The Medical Director should correlate the field work and institutional work, assign cases to a designated institution for the more serious types of collapse therapy, offer physicians under his supervision opportunities for study and training in thoracic surgery and bronchoscopy at designated centers, so that at all times he would have a competent and well-trained staff. In many cases that have recovered it is undesirable to have them return to their former occupation. The state Medical Director should arrange for special training of these through the state Rehabilitation Department. He should conduct seminars at the various institutions, participate in staff meetings and see that such are held regu-

larly. He should see that uniform and adequate records are kept and that statistical data is compiled. He should encourage clinical research and should furnish the stimulus for same.

Such a committee could well function in connection with the Bureau of Tuberculosis of the State Department of Health. It is the State Board of Health that is empowered to enforce the health laws and to hail violators into court. No such authority may be vested in a tuberculosis committee.

Where federal funds are available for state aid in the control of disease such funds are invariably allocated to the states through the state Departments of Health and under their control. Senate Bill 1851, introduced April 17, 1944, creating a Division of Tuberculosis Control in the Public Health Service and authorizing an appropriation of $10,000,000 for the purpose of carrying out the provisions of the act, specifically states that such aid shall be given "through state health authorities and in accordance with plans presented by the health authority of such a state and approved by the Surgeon General." It would seem advisable that as soon as the present Tuberculosis Sanatorium Commission of Kentucky completes its task of selecting five sites—and that is all the bill empowers them to do except approve the Medical Directors selected by the local boards, this association should consider further legislation with a view to amplifying its powers and duties in order to secure a well co-ordinated program in tuberculosis control. We should also go on record as favoring a pre-marital X-ray of the chest, and should urge all applicants to apply for this at their local health department or at other competent sources.

For the first time in the history of the state, we have an unexcelled opportunity to institute procedures in the control of tuberculosis that promise to be fraught with the most gratifying results. The responsibility for the success of this movement rests on the public and the profession alike. It behooves us, as guardians of public health, to assume that leadership and cooperation that is rightfully expected of us, in order to achieve a full realization of the benefits for the people that are bound to accrue by faithfully assuming our obligations.

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ORATION IN MEDICINE

CONSERVATISM AND LIBERALISM IN MEDICINE

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On the twenty ninth of October, 1929, the New York Stock Exchange suffered a stroke of apoplexy. Few of us will soon forget the widespread paralysis that followed that disaster. Since then we have witnessed and in varying measure participated in a debate which in significance as well as in acrimony is comparable only to the Great Debate of the closing years of the eighteenth century over the adoption of the Constitution.

At first the parties to the present debate indulged principally in virulent vituperation. The one group who championed the traditional order and who styled themselves individualists and realists who had both feet firmly on the ground, referred to their opponents as reckless innovators, sentimental dreamers, romantic optimists, Utopian idealists and as radicals who were assiduously blowing the bellows of sedition and striving to awaken class prejudices. And when they were ready to deliver the *coup de grace* they accused them of being deficient in those God-like attributes that are necessary to meet a pay-roll. The other group who championed the emerging humanitarian movement referred to their adversaries as reactionaries, economic royalists, tories, copperheads and obstructionists. This game of the pot and kettle was soon abandoned by all but the more backward who were too retarded to sense its futility.

When strident villification and picturesque anathemas gave way to calm appraisal of major premises it soon became apparent that the arguments presented by both groups were but cobwebs spun between the worm eaten rafters of an ob-

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solete *laissez-faire* economics in complete oblivion to the pathetic needs of a common-sense world. Our American system, based as it was on the assumed universality of the acquisitive instinct and on the concept that the government should function only in the interest of property and trade when brought to bay, was able to show only the most dubious of credentials. There arose in opposition to it a philosophy of government based on the value of human beings and postulating as its objective a true equalitarian democracy in which the government should function as the servant of the common well being. Thus the line of demarcation was formed and the issue became clear between the two schools of thought which are known respectively as Conservatism and Liberalism.

The Conservatives are cautious by nature and having a large stake in the existing order are content with an economic and social arrangement that has justified itself by the prosperity it has brought to them and which it would bring to others, they doubt not, if those others would manage their affairs with equal prudence. They desire no innovation; established forms answer their needs and fill the measure of their ideals. They are stout upholders of the *status quo* certain to lose in prestige and power with any relaxing of the existing system and they see no reason to question the sufficiency of a system of which they are the distinguished beneficiaries. And so, influenced by habit, by pecuniary interest and with eyes fixed lovingly on the past, they close the windows of their minds to the invigorating breeze of new social doctrine and see no need for readjustments to meet changing conditions.

The Liberals, on the other hand, do not believe that the past exudes any special odor of sanctity. They do not believe that our government rests on an unchangeable contract entered into by our ancestors in the remote past, but on a contract which must be reaffirmed by each succeeding generation, or renegotiated to meet the needs of altered conditions. They believe that government is best which leads to the greatest length, breadth and completeness of life and that the ultimate criterion of the value of a social organization is the degree to which it promotes security, tranquility and justice for all. In short they look to the progress and welfare of human beings as the goal of their striving.

Liberals are especially suspicious of such pious fictions as the American Way and the Good Old Days. They are aware that the most typical attribute of the American Way is, and always has been its readiness to change, its willingness, its eagerness to discard the obsolete, the antiquated and the ineffective and to embrace the new and the fresh. Liberals do not wish to return to the Good Old Days. Neither to the good old days of Salem witchcraft, slave markets or Sherman's march through Georgia; nor to the good old days of Captain Kidd, John Jacob Astor, Jay Gould, Samuel Insull or Al Capone; nor to the good old days before 1914 that marked the period of gestation of World War I, nor to the past twenty years which have carried within them the seeds of the present disruption. With the essential goodness of those Good Old Days Liberals are not impressed!

Our country and our profession are now faced with a stupendous problem. This problem is the deteriorated and deteriorating health and vigor of the American people. To those who have been socially conscious during the past quarter of a century it is no surprise to hear that thirty per cent of our young men are unfit for military service, and that twenty three and a half million of the people of the United States are suffering from chronic illness and physical impairment due largely to neglect. The clouds have been gathering for years where all who would could see them, let us not feign surprise at the thunderclap. Whether the fault lies with the federal government, the individual states, school teachers, churches, doctors, parents or the people themselves is an academic question and need not be answered. But to the problem itself we must find the answer. We can no longer temporize or vacillate or refer the problem to a committee.

The solution is long overdue. Twenty five years ago when the problem should have been attacked the men who were eager and qualified to do so found the stern demands of post war economic necessity holding them in their grip, narrowing the horizon of their thoughts and actions and all but obscuring the vision of a larger accomplishment. Should another twenty five years go by before the tide of physical deterioration is turned back we may find to our dismay that fifty, sixty or even seventy five percent of our youth is incapacitated for the duties of either peace or war. We pray there will

be no more wars but we dare not childishly mould our conduct on that assumption. And if perchance there are no more wars we will never count those labors lost which have restored our people to health and vigor.

It is the custom in what is referred to theoretically as Christian civilization to make some scanty provision for those who have become crippled or diseased. It would be a matter of political wisdom, military expediency and ultimate economy to prevent their becoming so.

If as the Conservatives hold, economic inequality is necessary to keep the earth from flying from its orbit, we can at least mitigate the clinical evidences of the heartbreaking contrast between affluence and wretchedness. To those who believe that help to the crippled and sick is the prerogative of local political subdivisions we say that when such service fails, as it has failed, because of the inertia or the lack of authority or the lack of funds of local administrative bodies and the consequences of such failure extend beyond the borders of their own political subdivision so as to endanger the entire populace with epidemic diseases or military inadequacy as they now do, general interests are affected and a more general remedy is demanded.

We cannot delay remedial measure because of anxiety over their effect on the future character, self reliance or initiative of the recipients; nor can we withhold these services and ask the unfortunates to comfort themselves with the patriotic reflection that they are dragging out their miserable lives in conformity with strictly constitutional methods; nor can we stop to wipe away the crocodile tears of those who weep lest those who get no medical attention now should get somewhat less than perfect medical attention under a new order.

It is clear to all whose attitude is Liberal that a solution to this problem will be found only when a substantial portion of the medical profession links its science and art to the authority and resources of national agencies. Medical service rendered in these circumstances is not charity but a privilege, not bounty but justice, not sentimentality but enlightened self interest born of a desire to use what brains God has given us to better the lot of all the American people.

If the very first plan tried does not achieve the desired results we must try again and again. Even our Constitution has had to be amended twenty one times. It is imperative that all cesspools of disease be eradicated now, if for no other reason, than that the sturdy, healthy young men and women of our country who have received proper medical attention as they grew up through their own or their parents' initiative and resources will not be called upon to carry alone and unaided all the burdens and hazards of possible future wars.

You and I embarked upon the study of medicine with the intention of learning the principles and technics that would enable us to devote our strength, our lives and such talents as we might possess to the alleviation of human ills. Let us not now subordinate that ideal to any other. Let us remember especially that the past is strewn with the whitening bones of many once imposing institutions whose leaders were more concerned with perfecting and perpetuating their internal organization than with discharging those external functions for which they were established.

The armed conflict in which we are now engaged will one day be over. But our war against disease, deformity and undernutrition will never be over; it is unending and our enlistment is for life. We have been told that as our population increased, moved westward and finally occupied the entire area between the two oceans opportunities of various kinds have disappeared. For us, on the contrary, new opportunities are arising. There lies before us a vast territory awaiting cultivation; the countless Americans in need of our services constitute a challenge to our professional skill, our mental resourcefulness and our sociological resiliency. This field is not one to be preempted, exploited and plundered according to well established precedent but one in which our efforts must be directed toward restoration, rehabilitation and conservation. So, let us serve the rising rather than the declining order, let us transform our daily lives into something nobler than a round of debits and credits. Let us face in the direction we are going, preserving as best we can all that is truly good in the old to dignify and embellish all that is commendable in the new.

Only twelve states out of the Union do not require Premarital examinations before issuing a marriage license. They are as follows: Arizona, Arkansas, Florida, Georgia, Kansas, Maryland, Minnesota. Mississippi, Montana, Nevada, New Mexico, and Washington.

THE COMMON AREAS OF MEDICINE AND DENTISTRY

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When the first dental school was established in 1840, there was rather widespread discussion as to whether dental education should be conducted separately, or as a part of the medical curriculum. While there was wide difference of opinion regarding location, there was considerable agreement as to content. Clinical experience over many years had shown important connections between oral and systemic diseases, and while these could not, in the first half of the 19th century, be explained on any scientific basis, the findings of clinical experience throughout a long period tended to support their existence. These findings were the basis for agreement that whatever might be the location of dental education, the dental student should be provided with opportunities for a thorough medico-dental training. With these known connections in mind, the founders of the first to the tenth dental school had in mind a medical curriculum to which we added the necessary training in the special techniques of dentistry of that period. As far as can be learned, they achieved their objective in providing medico-dental training which for its time was excellent. This type of training probably would have continued had it not been for the wave of commercialism in which medical education became entangled, and which later also engulfed dental education. During this period dental education and dentistry emphasized the technical, while the medicine and medical education were engrossed in adjusting themselves to the great scientific advance which came in the last half of the 19th century. The common areas of medicine and dentistry, so well established at an earlier period, were forgotten by both. The dentist was kept busy meeting the growing demands for rehabilitation of human dentures, and the physician with the problem of applying new findings in the field of medicine and surgery.

While there was some discussion of effects of oral sepsis in the twenty years prior to the first world war, it was not until the close of this conflict that recognition of the relationships of medicine and dentistry were revised. This revival centered around the theory of focal infection, and the work of Hunter, Miller, Billings, and others. The theory of focal infection was not only accepted; it burst into a flame, and became so popular that it led to the wholesale mutilation of many human dentures. The theory was accepted as a fact; was badly misinterpreted, and tended to create in the minds of many practitioners the concept of focal infection as the only area common to medicine and dentistry. The establishment of such a limit to medical and dental relationships has seriously handicapped progress in other areas, quite as important and associated with quite as many benefits.

Fortunately, the wave of radicalism, early associated with the focal infection theory, especially in regard to its oral phases, has subsided. It is of course accepted that oral, as with any other infections, may be harmful to the individual; that they may aggravate already existing conditions, lower body resistance, and produce intoxications and sensitizations. Nevertheless, it is evident that further scientific evidence is needed before any broad approach, or radical interpretation can be supported.

It is not the intention to be excessively conservative in regard to the theory of focal infection. It is, however, the intention to indicate that the removal of teeth based on inadequate diagnosis and too broad an interpretation of the theory of focal infection may accomplish more harm than good. It is realized that this premise may be markedly controversial; yet it can be justified when one views all of the complications arising from partial or complete breakdown of the human denture. Typical cases in point are those involving arthritis. Here there has not been the levelling off to conservatism as has been the case with other conditions formerly charged largely against oral infections. Patients even now often go directly to the dentist for the removal of teeth, their actions being based on self-diagnosis, and their attitude extremely hopeful. It is not the intention to dwell upon arthritis, except by way of pointing out that in this area there is little or no reliable information showing that oral infections are etiologic factors. There may be exceptions to this statement; however, they are exceptions and not the rule. Naturally these infections are needless burdens to any pa-

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tient, and should obviously be treated as any infection; however, to continue on the assumption that arthritis and oral infections are closely related will apparently mean many disappointed patients, and continued loss of many teeth.

Of course teeth which may interfere with the health of the patient should be removed. Yet it should be considered that when a fourth of the denture is lost, the remaining teeth are required to carry an overload. This shortens their period of usefulness, and leads to the development of periodontal changes. Temporary relief can be gained by prosthetic appliances; however, if these appliances in turn place added strains upon the remaining teeth, they are eventually lost. Therefore, the removal of any functioning tooth or teeth means changes in the distribution of muscular stresses, shifts in habits of mastication and the beginning of what is in many cases complete loss of the natural denture. It is not strange, therefore, that while showing proper regard for health implications of oral infections, some appreciation should also be shown for probable effects which loss of a few teeth may have on the denture as a whole.

Following a return from a radical to a more conservative position regarding oral focal infection came serious attempts to bring medico-dental relationships into more orderly form. It is now recognized that the conditions which confront the dentist can be placed in four different classes or groups as follows:

(1) Those of purely local origin.

(2) Those which are entirely oral manifestations of metabolic disorder, infectious disease, blood dyscrasias, nutritional deficiencies and many others.

(3) These which represent a fusion of both conditions of oral and systemic origin.

(4) Those which are systemic manifestations as a whole or in part of oral disease, deficiency or disorder.

It is obvious that oral conditions of purely local origin lend themselves to direct service by the dentist and to surgical procedures which may involve the services of the oral or general surgeon. These are well known, and for that reason will not be discussed here.

Oral conditions which are direct manifestations of systemic disease or disorder represent a somewhat new area of common ground for the physician and dentist. In fact they represent the most significant connecting link between the two fields. When it is recalled that all of the infectious diseases, all of the blood dyscrasias, most of the metabolic disorders, the avitaminoses, and many other conditions express themselves in some way and to varying degrees in the oral hard and soft tissues, it is not difficult to visualize the extent of medico-dental relationships which are involved. Unfortunately these relationships have, because of the supposedly spectacular nature of focal infections, received but little consideration. However, it is gratifying to note that they are now being given the recognition which they deserve.

Beginning with the period of growth and development, and extending through adult life, the influence of systemic conditions express themselves in the oral hard and soft tissues. In fact, their influence is so widespread that it is difficult to point to a significant number of oral conditions which are strictly local in origin. It cannot be said that dental caries arises entirely from local causes, for were that true, more would have been accomplished in reducing its prevalence. It is now well known that diseases of the supporting tissues which, next to dental caries, represent the most widespread dental diseases, are as far as their etiology is concerned only in part associated with local influences. Successful treatment of these conditions cannot in a great many cases be accomplished without taking into consideration their probable relations to a large number of conditions. These may include changes associated with low ascorbic acid levels, diabetes, the anemias, leukemia, influenza, ageing, and a long list of systemic conditions which need not be mentioned here.

Many of these systemic conditions manifest themselves as gingivitis or stomatitis, and unfortunately they are assumed by many to be simple Vincent's infections and treated as such. It is not uncommon to see oral symptoms of blood dyscrasias, and other conditions treated unsuccessfully for weeks with topical applications of drugs, and the home use of mouth washes, without any attempt to find or treat the basic factors involved. Evidently too many have proceeded on the assumption that "Vincent's infection" can be labelled as a distinct and separate condition, rather than one which in most cases, should point to primary local irritants, or to one of a large number of systemic conditions which set the stage for invasion of the oral tissues by the fusiform and spirochete. Too frequently it is a case of treating the symp-

toms rather than the cause or causes. (Acute severe symptoms as against subclinical changes).

As previously stated, the oral symptoms of systemic diseases or disorders may be fused with those which arise from local causes, such as mouth filth; deficiency in the number of teeth, faulty dental restorations, habits of occlusion and the like. In such cases the problem of treatment on the part of the dentist becomes extremely difficult. He then needs the cooperation of the family physician if he is to be successful in his efforts. In these cases the individual seeks the services of the dentist for the conservation of his teeth. If the dentist in turn locates some systemic influences on the oral tissues, and refers the patient to his physician, he is expanding his service, and his treatment is more enduring if the patient is cared for by the physician to whom the case is referred. For this reason it is hoped that the cooperation of physicians and dentists will increase, and keep pace with modern trends.

Both physicians and dentists will be pleased to learn that a broad approach to diagnosis is now being emphasized in most dental schools, and that the basic sciences and general medicine are becoming a more significant part of clinical dentistry. At the same time, medical students are becoming more familiar with oral pathology and diagnosis. This will mean much in the future, and it is mentioned here because it indicates a trend which has much to commend it, and one which will doubtless grow in force during the next few years.

It is probable that there is no common area in medicine and dentistry associated with such enduring results as are those which spring from considerations of child health and nutrition. While the cause or causes of dental caries is not known, it is clear that proper development of the teeth and jaws through the conservation of child health, and through adequate nutrition, contribute greatly to more or less freedom from dental caries and periodontal disease later in life.

As true as may be the fact that dental caries cannot be prevented, it is also true that it can be controlled, and that the best time for the application of control measures is during the period of growth and development. While the dentist can with considerable accuracy predict the beneficial results of treating potentially or actually carious areas, these facts do not set the limits for control measures. There is also involved the possible need for considerations of nutrition, proper vitamin levels, and freedom from factors which may adversely influence development of the teeth and jaws. Much has been said regarding the need for considering the whole patient; that is, of seeing the many relationships which may exist between oral and systemic factors in health and disease. At no point is this view more sound than it is in relation to the dental problems of children. For that reason we should not expect much from mass production, regimented clinics or plans, which cause the child to become merely the recipient of dental service which may be too little and too late; and that which in terms of dental service considers only a part, rather than the whole child.

The modern approach to dentistry for children has its roots in pediatrics, in an understanding of growth and development, and in the intelligent cooperative efforts of the physician and dentist. When action is taken on this premise, the control of dental caries will become a reality. It will never become significant as long as the problems involved are considered as isolated and separate phases of medical or dental service.

One of the most significant movements in the United States at this time is that which has to do with attempts toward improving the nutritional status of American people. While many governmental agencies are concerned with this movement, the work and findings of the National Research Council are outstanding. While it is true that questions of nutrition appear to be everybody's business, and also while nutrition lends itself to the adoption of many fads, fancies, and empirical concepts the true situation nevertheless appears to be a serious one. Evidence points clearly to widespread nutritional deficiencies and their accompanying symptoms, and as a consequence the movement for improvement of national nutrition should be taken seriously despite the apparent confusion with which it is associated.

The dental profession is interested in nutritional problems because of the implications which these problems have to questions of oral health and disease. On the other hand, there is the growing conviction that an important factor controlling the dietary habits of American people is the condition and number of their teeth. There appears to be a marked tendency to select foods which can be eaten

with comfort and dispatch. The individual with the badly mutilated denture has reason for some change in his dietary habits, and for an increased desire to avoid those foods which while they may be desirable components of the diet, are masticated with difficulty. It is recognized that the tremendous use of packaged vitamins is interfering somewhat with the natural nutrition program. People are maintaining the customary dietary habits and attempting to avoid deficiencies created perhaps by these habits, through the intake of vitamins as such. It is just as natural for the edentulous or semi-edentulous patient to avoid effort with a broken down dental apparatus as it is for an artisan to avoid working with inadequate equipment or dull tools. In the case of the patient with badly mutilated denture, the shift in the diet is toward the carbohydrate side, or to the softening of foods through overcooking, both of which in general lead to a lessened intake in essential food factors. This is especially true of fruits, or uncooked and green leafy vegetables. These are avoided not only because mastication is difficult and slow, but also for the reason that many persons experience gastric distress when these are ingested without adequate mastication.

It is of course recognized that color, flavor, and many other factors may influence food selection; nevertheless, it is not difficult to believe that custom, and the condition of the denture play the greatest role. Solution of the dental phases of the problem are not to be found in artificial dentures, which in America represent precision prosthesis, excelling that of any other country. Nevertheless, these dentures, while satisfactory from a cosmetic point of view, are functionally as far below the normal as is limb prosthesis.

It should in general be more fully realized that as proficient as a dentist may be in the field of prosthesis, the area, shape, condition of the tissues and of the patient govern the stability and consequently the effectiveness of artificial full dentures. Previous atrophic changes in alveolar bone, improper relations between the edentulous jaws, and many other factors offer serious handicaps to the wearers of such dentures. It should not be assumed therefore that there is any significant degree of uniformity in the effectiveness of artificial dentures from a functional point of view. The best dentures may be as high as 25% efficient. The moderately good, and the poor dentures, are, if they have and value, useful only from a cosmetic standpoint. Again I am of course on controversial ground; nevertheless, I should like to point out that many analyses have shown that the average denture wearer is not very efficient in breaking up many important dietary components. Denture service is of course a highly important service which has improved greatly in recent years; nevertheless, it should not be used until all efforts toward conservation have been exhausted.

The solution to the problem lies in a type and degree of medico-dental collaboration which will look to the conservation of the natural denture and its proper functioning. When it is considered that at middle life fifty percent of our adults have lost fifty percent of their teeth; when it is also considered that many of the 73,000 active dentists normally in the United States could spend half of their time constructing dentures for completely edentulous patients, it is clear that the problem is not a simple one. That it has serious nutritional and health implications should be self-evident.

One reason for the great increase in the loss of teeth is to be seen in the greater proportion of older people in our population. Diseases of the supporting tissues of the teeth begin to occur for the most part in middle life. They represent in nearly all cases the accumulated effects of local irritants, systemic disease, malnutrition, current ailments, and those retrograde changes which are usually associated with advancing age. Thus the dental problem of childhood and youth is dental caries, and those of middle life and after are periodontal disease, and deficiencies in the number of teeth. Consequently, there are good reasons for the existence of effective collaboration in patients of all ages.

In connection with the problem of dental deficiencies, there usually arise questions regarding the need for adequate mastication. There appears to be no significant data showing that man is affected by swallowing large masses of food. On the other hand, there is some clinical evidence which tends to support the view that effective mastication is desirable.

Alvarez has expressed an opinion common to many gastro-enterologists, in stating that: "The stomach of man seems, then, to be about as efficient as is that of the dog in handling food that hasn't been chewed. It is hard to understand how this can be true when one studies hundreds of

stools as I once did. Many were so full of intact beans, peas, stalks of celery, apple and tomato cores, skins, centers, and compartment walls of oranges and grapefruit, pieces of gristle, and lumps of cheese that it was hard to see how there could have been much digestion of the food trapped in between such unchewed and undigested masses. Actually, many of the persons studied seemed to lose their flatulence and indigestion when given new teeth or a smoother diet, and hence I like to ask all patients with large gaps in their teeth to have them filled if this is possible. Today, all physicians are ordering teeth extracted, but few are seeing to it that false teeth or bridges are put in."

Evidence that foods may remain for a considerable length of time in the cardiac region of the stomach, with continued conversion of carbohydrates by ptyalin would, it appears, support the contention that the effective handling of carbohydrates may be enhanced by more thorough mastication and insalivation.

It has been suggested that the low residue diets of many patients with badly crippled dentures may be worthy of consideration, and that the shift to such diets is to some extent correlated with the ingestion of cathartics. Just how sound is this suggestion remains to be shown; however, when it is considered that low residue diets are usually lacking in certain essential food factors, it may not be so strange that the purchase of packaged vitamins and cathartic drugs is so widespread.

There are of course many other areas common to medicine and dentistry. Because of time limitation these cannot be discussed here. There are also many unexplored areas. The existence of these areas forms the basis for the view that the dental student should have greater understanding of the basic sciences and general medicine, and that the medical student should have some training in oral pathology and diagnosis.

The advances in the sciences stimulated by the first world war brought medicine and dentistry closer together. Need for still further collaboration will very likely spring from the present conflict. Especially will this be true if dentistry in the postwar period emphasizes preventive and control measures; measures which to be effective must go far beyond consideration of purely oral factors.

DISCUSSION

Charles C. McCoy: Since Dr. O'Rourke referred to the effects of war upon dentistry I am venturing to recall an incident of our Revolutionary War which possibly did considerable to popularize the introduction of artificial dentures in this country.

Joseph Warren, a physician, was probably the most beloved and most respected of the early revolutionary leaders in Boston. He was the highest ranking officer of the American forces at the battle of Bunker Hill. He was killed during the battle and buried on Bunker Hill, presumably by the British.

Several months after the battle, when the military situation made it feasible to do so, his friends recovered his remains and removed them from the battle field. The remains were identified beyond doubt by Paul Revere from two false teeth which Revere had fastened into Dr. Warren's mouth. The prominence of Dr. Warren and the rarity of artificial teeth at that time must have occasioned considerable general interest in this type of dental work.

Incidentally, Dr. Warren is credited with having asked Paul Revere to start on the nocturnal ride in which, thanks to Longfellow, he still gallops through the pages of history, and one of our counties, Warren, was named for him.

O. O. Miller: At Mt. Sinai Hospital some years ago they reduced the incidence of postoperative abscess on the lung by having preoperative dental care in surgical cases.

The Dole Pineapple Company in the Hawaian Islands was shocked at the state of the teeth of the natives working on their plantation and to encourage them in the use of milk, they prepared adequate formulas for the children and sold the milk to natives at a very nominal sum. In one generation they improved the teeth of those children remarkably.

I heard Dr. Frank Billings say "he hoped that the crimes committed in the name of focal infection would not be laid at his door." It is very encouraging to hear Dr. O'Rourke say that the wholesale removal of teeth in cases of rheumatism should be carefully scrutinized. It is not unusual to find a patient seeking relief somewhat like the pathetic story of the woman in the Bible "who had spent all she had and was none the whit better." These persons seeking relief from rheumatism have had tonsils out, teeth extracted, appendix removed, and are still suffering from arthritis; a number of these cases probably due to metabolic changes.

E. C. Hume, D. D. S.: There are a number of studies that have been carried out that show

the relationship between medicine and dentistry to such an extent that I have often hoped that the two groups would meet together much more often than they do, and around various hospitals I can say this, that so far as my association with medical men is concerned, it has always been very cordial and cooperative on the part of the medical men.

I recall work done at Mayo Clinic some years ago on "Renal Calculi and Infection about the teeth." I also recall taking part in an autopsy in a case that, had that been looked into earlier, possibly the victim of that autopsy would have lived a great many years longer. There are a great many instances in which the two groups ought to cooperate and with the men who make the prostheses for these badly mutilated mouths. Sometimes it is necessary to do a mutilating operation in order to save a patient's life, and I want to say this for the dental men in this town. We have some men here who are the equal of anybody any where. Any of your surgeons who know the job that these men have to do in making prostheses for people with cleft palates, know it is one awful job, and yet a physician once told me he sent such a patient to a dentist who wanted $100.00 to make the appliance and I said, "what would you expect a man to do? It is worth three or four times the cost of the operating procedure to make that youngster's appliance and take care of it."

A. W. Moore, D. D. S.: Dr. O'Rourke's paper has shown us the close relationship that exists between dental health and general physical well being. From this we cannot but conclude that a closer collaboration between the physician and dentist is imperative. One factor that might be mentioned in bringing about a closer physician-dentist relationship is the role of the dental intern in hospitals. Having served as intern in a Chicago hospital whose staff was fully aware of the mutual benefits that might be derived from having dentists on their staff, I have full appreciation for the benefits which arise from the cooperative activities of physicians and dentists. The duties of the dental intern are too numerous to mention; however, one of the useful purposes that they may serve is in conjunction with the department of anesthesia. Post operative complications often arise from oral sepsis or loose teeth in the mouths of patients undergoing or recovering from general anesthesia. The aspiration of infected material such as dental calculus or a loose tooth, which may be freed by the insertion of an airway or other procedures used in general anesthesia, has often caused lung abscesses and fatal infections. If the dental intern on call made rounds with the anesthetist on call each evening, they would both benefit from such an arrangement. The dental intern could examine the mouths of all those patients scheduled for general anesthesia the following day; he would point out to the anesthetist any significant oral conditions, and note on the patient's chart those conditions that might cause complications during anesthesia or the post-operative period. The anesthetist could point out any medical pre-operative complications to the dental intern and explain what type of anesthesia and pre-anesthetic medication were to be used, and why these particular agents were selected. This cooperation between the anesthetic and dental staff would not only eliminate many post-operative complications which could arise from oral conditions, but would also provide the dental intern additional training in a field allied to both of our professions. I feel that in the future, every hospital, regardless of its size, should have dental internships and that eventually it will be required of all dentists to serve such a period of internship. Many of you men here, who are associated with hospitals at the present time, should readily see the advantages of such a relationship between dentists and physicians.

J. T. O'Rourke, (in closing): The general theme of my remarks had to do with the conservation of the human denture. While I have the fullest appreciation for the advances which have been made in dental prosthesis, I do not think that excellence in this field should distract our attention from the chief objective of the dental profession, that of conserving teeth. Finally, may I say that I am strongly of the belief that the dental profession cannot achieve this objective of conservation alone; but rather will be required to enlist the full cooperation of the medical profession.

Pulmonary tuberculosis is present in a significant proportion of adult patients admitted to general hospitals and remains undetected during the hospital stay unless all patients receive routinely a chest X-ray examination. Such unrecognized tuberculosis is a hazard not only to the patients themselves but also to the hospital employees who may be exposed to it. One of the measures essential to the solution of this problem is routine chest X-ray examination of employees.

Although the discovery of tuberculosis among hospital employees is necessary for the protection of both employees and patients, the detection of the disease in patients is obviously of equal if not greater importance. It is hoped, therefore, that hospitals, physicians, and others will give more recognition to the existence of this problem and to the need of a complete plan of action, including routine chest X-ray of all adult admissions as well as periodic examination of medical students, nurses, and all other employees. N. Y. State Dept. of Health, "Health News" May 8, 1944.

POOR DIAGNOSTIC VALUE OF COLD AGGLUTININS IN PRIMARY ATYPICAL PNEUMONIA

Lieutenant Colonel Arthur C. McCarty
and
Captain Gerald L. Infield
Medical Corps, United States Army

Up to the present time, the isolation and identification of a nonbacterial respiratory pathogen has seemed to be a problem for highly specialized research workers, and even in their hands, required long and carefully controlled procedures. After spending the past winter in the Station Hospital, Nashville Army Air Center, during which time some seven hundred cases of primary atypical pneumonia were treated, we were quite cognizant of the many diagnostic problems that arise with these cases and were in complete agreement with numerous other physicians who expressed the need for a simple clinical laboratory test for an early and accurate diagnosis.

The reports of several workers who noticed, as we did, that hemolytic anemia develops in certain severe cases of primary atypical pneumonia also noted difficulties in typing the blood of such cases, preliminary to transfusion. These workers found that both these hematologic abnormalities are related to the findings of reversible cold hemagglutinins in the serum or plasma of such patients. These investigators, after studying a limited number of cases, felt that most of the patients with severe and extensive forms of primary atypical pneumonia exhibited this abnormality to a varying degree, although hemolytic anemia was encountered only rarely. The cold agglutinins were believed to appear only after the illness had progressed for a few days, and that the titre increased as the disease advanced. The maximum titres were found at, or soon after, the end of the febrile stage of the illness. Thereafter, the titre dropped.

Cold agglutinins are easily tested for. If citrated or oxalated blood is placed in a refrigerator, the cells clump and appear to clot but the mass of cells can be readily broken up by shaking and the clumping can be entirely abolished by warming the the blood to 37° centigrade. This procedure tends to differentiate cold agglutinins from other forms of hemagglutination.

Cold agglutinins have been recognized previously in a small number of cases, which mostly include cases of blood dyscrasias and liver diseases, and has also been associated with thrombotic and other peripheral vascular diseases. The only other infectious disease in which the phenomenon has been noted regularly is trypanosomiasis. Here the agglutinins have been found both in human cases and in experimentally infected animals.

The occurrence of cold agglutinins in atypical pneumonias was felt by those workers to be independent of chemotherapy with sulfonamide drugs. What relation, if any, they have to the etiology of the disease has not yet been determined.

While these findings have not been demonstrated in a large percentage of cases, it was thought by some that the test might serve as a simple means of distinguishing some of the cases of primary atypical pneumonia. If practical, it would be highly welcome.

Since we are not familiar with any work having been done to determine the percentage of cases, diagnosed as primary atypical pneumonia, which present the cold agglutinin phenomenon, it seemed that it might be of value to run a series of cold agglutinin tests on a group of more severely ill patients to try and determine the practical value of this procedure as a diagnostic aid. We therefore selected forty cases which were carefully diagnosed according to the precepts as outlined by Dingle, et al, who constituted a commission for the investigation of atypical pneumonia and other respiratory diseases at Camp Claiborne, Louisiana.

After the disease had been well advanced over several days duration, we ran the cold agglutinin test. Our results were as follows: In only two cases where primary atypical pneumonia was proven clinically beyond any reasonable doubt, did we receive a positive cold agglutinin report. All others were reported negative. On the other hand, cases which just as certainly were diagnosed as malaria, gall bladder disease and microcytic anemia, gave positive cold agglutinin reactions. We have concluded therefore that this phenomenon is of little value in the diagnosis of primary atypical pneumonia.

Summary

1. Cold agglutinins are recognized as being present in a few rather severe cases of primary atypical pneumonia.

2. The reason for this phenomenon is unknown.

3. Despite the hopes of many and the be-

From Medical Service Station Hospital, Nashville Air Center, Nashville, Tenn.

lief by some that the cold agglutinin test would be a valuable diagnostic aid, experience at the Station Hospital, Nashville Army Air Center, with forty cases has resulted in the belief that it is of little or no value.

POST WAR PLANNING

H. K. Stark
Lexington

When I was notified that I was to talk to you gentlemen tonight on Post-war Planning, I was somewhat appalled. As a matter of fact, I still am. So much has already been said and written about this subject that it would seem that anything I could say now would be largely repetition of things all of you have already heard and read. Therefore, I shall treat but briefly the more familiar aspects of the subject and then pass on to matters which I consider allied phases and which I hope may prove of greater interest to this group than the usual orthodox discussion.

The Committee for Economic Development is, so far as I know, the only civilian agency attempting a comprehensive job of post-war planning. It was formed by a group of forward looking men with a view to the promotion of organized plans for conversion of our economic life from a war to a peace time basis. The idea originated in a meeting of a group of private citizens with Secretary of Commerce Jesse Jones in the fall of 1942. The top committee authority is the Board of Trustees, consisting of twenty representative business men from various sections of the country. The Committee is a non-profit organization, financed entirely by contributions from private business. It has its headquarters in the U. S. Department building in Washington, and has access to various facilities of and data developed by that department, but there is no formal or official connection between the Committee and the Department or any governmental agency. It is in every sense of the word a private institution.

Underlying this central organization are twelve Regional Committees, which in turn have organized District Committees, one for approximately each million population in industrial areas, and which again in turn have organized community committees, one in each urban community. Various committees are then arranged by these community committee chairmen, to function with respect to the different industries, businesses, professions, etc. I understand that Dr. Cawood has been asked to organize a medical committee, but it is also my impression that no line of activity for that committee has been suggested.

So much for the organizational background. As to progress, you have all, I am sure, read and heard a great deal. Just a very brief picture of the local situation as of a recent date may be of interest. The returns from a survey as yet incomplete, tabulated up to last Wednesday, show that expenditures are contemplated in the Lexington trade area for improvements and expansion of facilities in the immediate post-war period to the extent of approximately $6,000,000. No doubt the completed survey will indicate a much higher figure. It is expected that this data, together with other information now being assembled, will be translated into terms of employment and in turn related to estimates as to the number of people expected to be available, the idea being, of course, to determine what measures may be necessary to enable private industry to offer employment to all who may seek it.

It is obvious that, if private business does not meet this need for employment, government will, and that means such things as W.P.A., P.W.A., C.C.C., etc., and it also means another long and very definite step toward the socialization of all of the business and professional activities of our citizens, including the practice of medicine, if you please. And so all of us have reason to be deeply concerned and interested in the success of this planning effort. It is a tremendous task and, so far, only a beginning has been accomplished. And, to date, so far as I can see, the work has been confined to activities having to do with employment, which would seem to be almost exclusively the concern of industrialists and tradesmen. I do not minimize the importance of these activities. I believe they are vitally important and deserve all the support all of us can give them.

But I wonder if there isn't another important phase of this program which, so far as I have been able to learn, seems to have been left in the background. The Board of Trustees of the Committee for Economic Development is composed of sixteen industrialists, a Vice President of the University of Chicago, the President of the Book of the Month Club and the Executive Director and Secretary who

Read before the Fayette County Medical Society, June 13, 1944.

are not identified as to vocation. There appears to be no representation of the medical profession. Perhaps it is proper that the industrial and the medical phases of the problem should be treated separately, although the solution of the post-war problems of the medical profession will certainly have an important impact upon the economic situation. Be that as it may, I have seen little or no indication of concerted post-war planning by the medical profession. This may be due entirely to the simple fact that I am not in touch with such activities. I do not say that no such activities exist. But I do say that, in my opinion, the importance of the need for them can hardly be over-emphasized.

I spoke a moment ago about the possible socialization of business and professional life. You don't need me to tell you of that threat. You probably know as well as, or better than I, that the trend in that direction will surely be greater in the post-war period than ever before. I am not at all sure that there isn't grave danger that you gentlemen of the medical profession will be caught napping. I know that your National Association and undoubtedly your local associations are alert to the political moves and are active in combating that trend. But, how active? And how are you going about it? Are you leaving the job entirely to committees, or is each of you making it his personal responsibility? Do you personally know your representatives in both houses of Congress and do you see to it that they have the facts in answer to such claims of the proponents of socialized medicine as may be unrealistic, visionary, misleading or plain false? Letting "George" do it won't work.

It must be recognized, too, that political trends are largely the result of public demand. They are at least made possible by public apathy. What are you doing toward eliminating the factors which tend to produce public demand for the socialization of medicine? We of the utility industry have fought and are still fighting such a political trend. In my opinion, we were late in bringing our full efforts to bear toward the elimination of those factors that shaped adverse public demand. I hope you medical men are more far-sighted. I, for one, do not want to see the socialization of medicine, but explore carefully, if you will, the mind of John Q. Public. He may not be so sympathetic.

Out of my utility experience, I can tell you one thing. Your profession has performed miracles. Your record for service to humanity constitutes a glorious history. But miracles are not enough. Protests against political action are not enough. We tried all that.

In this connection, I earnestly recommend to you a book by Leo Cherne, Executive Secretary of the Research Institute of America, very recently published by Doubleday Doran, entitled "The Rest of Your Life," and particularly Chapter 13 on "Mice, Lice," and Chapter 14, the title of which is "—and Madmen." Let me quote just a few passages. One, "As in the case of private group health plans, compulsory federal insurance is inevitable." Again, "The long-time trend in medicine moves almost without deviation in the direction of greater social availability." And still another, "In many ways medicine stands on the brink of the private-enterprise glacier. It is the first segment that is likely to break away or melt away quickly under the heat of state. Enterprise will be in the saddle at war's end, but the war itself will already have done much to shake medicine loose from the hardier areas of the profit system." The New York Herald Tribune, in speaking editorially of the Wagner-Murray-Dingell Bill, suggested that the doctors work out "some better program for attaining the same objective."

The key word in all this means to me to be "greater social availability." Rest assured, gentlemen, that whether the demand be for greater social availability of employment, of electric energy or of medical service, if private enterprise fails to do such a thorough job that public sentiment will be predominantly for it, government will take over.

I should like to make it clear that I am in no sense of the word accusing your profession of failing in any way to meet your obligations to society. But I do know that society is demanding more and more from all of us whose service is "tinged with the public interest," as the saying goes, and I am firmly convinced that all such must be prepared to go much farther along the road toward so-called socialism than we have ever in the past considered advisable or appropriate. I think we must voluntarily sacrifice our independence of action to an extent far beyond anything we have ever thought any one should have a right to expect of us, if we are to avoid the full brutal application of State Socialism.

And now, a word with respect to a particular post-war problem that gives me great concern. It seems obvious that the stress and pressure of combat in this war

far surpasses anything ever before encountered in human experience. Our last war resulted in many casualties in the form of mental disturbances. In view of the more terrible combat conditions in this war, it seems reasonable to expect thousands upon thousands of our boys to be afflicted by some sort of mental fog. I understand that many such have already been released from combat duty. The more obvious and pronounced cases will, no doubt, be cared for in Federal institutions already provided for that purpose. But several questions arise in my mind with regard to this whole problem:

1. Have steps been taken toward a comprehensive planned program for the best possible care for these afflicted men and possibly women?

2. Is such a planned program feasible?

3. Should there be inquiry by competent people into the adequacy of facilities, personnel and methods in such institutions as the local Veterans Hospital?

4. Should some investigation be made as to procedures followed in mustering men out of service to determine if adequate measures are taken to ascertain mental condition before discharge?

5. Assuming that all of those things are done, that adequate institutional care is assured for all those that should have such care, will there not be many more who are affected to a lesser degree, and are there any steps that may be taken that will tend to improve their chances for complete recovery? Can something be done toward smoothing out the problem of fitting these people into our economic life?

Of course, I realize that the problem is primarily that of the psychiatrist and that many of my questions and ideas may be entirely impractical, but if out of them you get only one idea which will lead to some betterment of the lot of these unfortunates, then these few minutes will have been worth while. An able man without employment is an unfortunate incident, but a man without a well mind is a tragedy, not only from the economic standpoint but from the standpoint of all human relationships. If there is some kind of a job here that can be done, you gentlemen will surely recognize it and will know best how to go about it. No one else except the psychiatrist is equipped for the job. But there simply are not enough psychiatrists to do the job without help. And, in my blissful ignorance of such things, I venture to suggest that surely it does not necessarily depend wholly upon the highly specialized psychiatrist. I believe that every experienced physician is, to a considerable degree, also a psychiatrist. Certainly it must be true that his experience in dealing with physical defects enables him generally to at least recognize symptoms of mental disorder.

I know that Lexington is nationally recognized as a medical center, as the home of experienced physicians. I know that our Health Department has time and again been honored by national authorities for its outstanding achievements. I am confident that, if there are answers to my questions, you will have them.

In conclusion, what I have attempted to say may be summed up in four sentences:

1. Industry has an obligation to furnish employment to all who may seek it and, if it fails, government will take over.

2. The medical profession has a similar obligation to see that its services are readily available to all who have need for them and, if it fails in that, government will take over.

3. Industry and the medical profession have an obligation to work together on the problem of fitting the mentally upset veterans into our economic life.

4. All of this requires planning.

PRIMARY CARCINOMA OF THE LIVER

Case Report

Alvin B. Ortner
Louisville

This case is being reported because of the relative rarity of the lesion and its difficulty in diagnosis.

The patient was first seen October 2, 1942. He was a 53 year old white male whose occupation was that of stone mason, his chief complaint was pain in the right side and heaviness of the right shoulder.

The onset of the present illness was in April 1943, six months prior to the time I saw him. At this time he noted pain in the lower thorax and upper abdomen on the right. The pain was pleuritic in nature and was greatly exaggerated on breathing. There was no associated cough or other symptoms of a respiratory infection. His chest was strapped by his wife which gave an alleviation of the pain and in three or four days it completely disappeared. Also at the onset he experienced a feeling of lassitude which persisted throughout his illness.

The pain on the right side recurred on

Read before the Jefferson County Medical Society, February 7, 1944.

numerous occasions. During these subsequent attacks, which would last for several days, he would experience pain on top of the right shoulder. The pain would leave with strapping, or occasionally disappear spontaneously without treatment.

There were no other symptoms until approximately three weeks before he came to the office. He complained of anorexia and vomiting in the morning. But in spite of the poor appetite and frequent vomiting he noticed that for the past two months his waist line had increased three inches in circumference.

Nervous System: Negative except for blanching and numbness of the fingers during cold weather.

Cardio-Respiratory: There was occasional precardial pain. Dyspnea on exertion which had increased since the onset of present illness. Six weeks before he had his chest x-rayed at the Waverly Clinic for pulmonary tuberculosis which was negative.

The Gastro-Intestinal History: Other than that given in present illness was that his bowel habits had always been regular, until the past two weeks. Since then there had been a frequent desire to defecate and tenesmus. His stools which had previously been formed had become diarrheal in character. A few which had been formed were smaller in caliber and he described them as pencil-like. There had been no alcoholic stools, but he had had one stool about a month previously that he described as tarry. There had been no jaundice, food idiosyncrasies, pre or postprandial pain or colic; no hematemesis or bright red blood in the stools.

The genito-urinary history was negative except for nocturia which had increased to five or six times a night during the past three weeks. His past history and family history were non-contributory.

Physical examination revealed the temperature, pulse and respiration to be within normal limits. The head, neck and thorax were not remarkable. The abdomen was slightly full. The anterior abdominal wall showed normal respiratory excursion. Percussion note was tympanic anteriorly over the lower abdomen. Over the upper abdomen it was dull and there was also shifting dullness in the flanks. Palpation revealed normal muscular tone. Just below the left costal margin and the xyphoid the left lobe of the liver could be palpated. From the midline laterally on the right, occupying the entire right upper quadrant a very firm, irregular nodular mass could be felt which was slightly tender. This mass appeared to be liver or a mass firmly adherent to the inferior surface of the liver.

Rectal: Digital examination was negative. A proctoscope was introduced and the rectum appeared normal. A sigmoidoscope could be passed easily for 10 inches and inspection was negative, there was no edema of the extremities.

The patient was admitted to the hospital on October 4, 1943 for further study.

The laboratory work on admission was: Hemaglobin 94%, R. B. C: 4,840,000, W. B. C. 17,900, Neutrophiles 83%, Segmented forms 72, Stabs 11%, Lymphocytes 13%, Monocytes 2%, Basophiles 2%.

Urinalysis was negative except for a few hyaline casts, a fasting blood sugar was 158 mg. The blood Kahn was negative.

The fluoroscopic examination of the chest was negative and barium enema failed to reveal a lesion in the large bowel.

An exploratory coeliotomy was performed through an upper right rectus incision. On entering the peritoneal cavity approximately 5,000 c.c. of clear straw colored fluid was found in which was floating some fine fibrin flocculation. The liver was enlarged approximately one and a half times its normal size and estimated weight was 2100 gms. The liver was markedly indurated and grossly no normal liver tissue could be visualized. Over the entire surface were yellowish grey nodules ranging in size from a millet seed to the size of a large pea. None of these lesions were umbilicated. On the inferior surface of the right lobe was a smooth pearly grey area, slightly retracted, measuring about 3 cm. in diameter.

The wall of the gallbladder was grey and thickened and there were no calculi in its lumen. The hepatic flexure of the colon was adherent to the inferior surface of the liver and to the gallbladder. The head of the pancreas felt normal, the remaining exploration was negative except for a gland in the transverse mesocolon which was approximately the size of a hickory nut. A biopsy of the liver was taken and the abdomen closed in layers with silk.

Postoperatively the patient had frequent attacks of nausea and vomiting. He could retain but little by mouth and was given parenteral fluids and one blood transfusion. Shortly following operation he became distended. This was due both to postoperative ileus and to a reaccumulation of ascitic fluid. The ileus responded well

to prostigmine and on the fourth postoperative day a paracentesis was done. 3,100 c.c. of serosanguinous transudate was removed. Following this his course was uneventful until the tenth postoperative day. On the morning of this day his skin sutures were removed and that night during a bout of vomiting he had a complete dehiscence of the wound and an eventration of the small intestine.

He was returned to the operating room and the wound closed with through and through stay sutures. At this time the wound edges were glossy and showed no evidence of previous union. The liver appeared essentially the same. Another biopsy was taken as Dr. Weeter had expressed a desire for another piece of tissue.

Following this the patient's course was gradually down-hill and he expired eight days after operation.

The pathology report of both liver biopsies was primary bile duct adenocarcinoma. Autopsy was not obtained.

This case has a number of interesting features. Primary malignancy of the liver is rare and gives no definite symptomatology. It must be diagnosed either by exclusion or by biopsy. In a diagnosis by exclusion the following must be considered. In this case the history of a 53 year old male with a change in bowel habit and an alteration in the character and size of the stool with an enlarged nodular liver would be suggestive of left colonic carcinoma. The passage of pencil stools as obtained in the history would indicate that the lesion was annular and located in the lower rectum or more probably in the anal canal, but digital examination failed to reveal this. The most frequent location for left colonic cancer is at the rectosigmoid and this too could be ruled out both by sigmoidoscopic examination and barium enema. Malignancy of the stomach frequently metastasize to the liver and this too was ruled out by upper gastro-intestinal x-ray. Teratoma of the testicle may invade the liver, but it can usually be felt locally and if the metastases are wide spread, pulmonic lesions are nearly always present. Hypernephroma and renal calculi may likewise invade the liver, but these too, when wide spread usually appear in the lung, and also both of these frequently show, but not always, urinary changes. Another malignancy which frequently invades the liver is a breast carcinoma, but this too, especially in a male, should be easily found locally.

Malignant tumors of the pancreas metastasize to the liver relatively late. Those of the head will usually manifest themselves by biliary obstruction before there are gross metastases. Those of the body or tail are rare and can not be ruled out except by studies of the blood or urine amylase, diastase or lipase, which was not done in this case.

Both Laennec's cirrhosis and syphilitic cirrhosis may in some of their stages show an enlarged and nodular liver. In the former, symptoms of portal hypertension are usually present while in the latter a positive blood Kahn is usually obtained.

Unfortunately liver function tests were not performed on this case. The family has been put to a great deal of expense and we did not wish to add more, as such test was of academic interest only.

BOOK REVIEWS

A MANUAL OF MEDICAL PARASITOLOGY—By Clay G. Huff, Professor of Parasitology, University of Chicago. The University of Chicago Press, 5750 Ellis Ave., Chicago, Publishers. Price $1.50.

Shrinking of geographical space brings us nearer to areas in which exotic diseases occur, consequently it is necessary for every practitioner to give more attention to this subject so that he can recognize these parasites as well as the symptoms they cause.

This manual was undertaken to fulfill the need for a guide to the study of medical parasitology and is an outgrowth of the memographed manual which has been used in the required course in parasitology at the University of Chicago.

The colored plates of malarial parasites film the paintings of Miss Bohlman which add to greater efficiency in their identification.

This book is recommended to instructors in laboratory schools as well as a reference book to medical students.

THE AMERICAN ILLUSTRATED MEDICAL DICTIONARY—By W. A. Newman Dorland, A. M., M. D., F.A.C.S., Lieut-Colonel, M. R. C., U. S. Army; Member of the Committee on Nomenclature and Classification of Diseases of the American Medical Association; Editor of "American Pocket Medical Dictionary". With the Collaboration of E. C. L. Miller, M. D., Medical College of Virginia. Twentieth Edition, Revised and Enlarged. 1668 pages with 885 illustrations, including 240 portraits. Flexible and Stiff Binding. Philadelphia and London: W. B. Saunders Company, 1944. Plain $7.00. Thumb-Indexed $7.50.

This new 20th edition is the result of an es-

pecially heavy revision made necessary by the addition of more than 2500 new words, a correct guide is given to their etymology, capitalization and pronunciation. Particularly important are the additions in the fields of biochemistry, chemotherapy, allergy, specific therapy, endocrinology, vitamin research, tropical and parasitic diseases, mycology, and the vast array of new synthetic drugs and medical preparations. Special attention has been devoted to the vocabulary of war medicine and surgery. Terminology conforms with that of the "Standard Nomenclature of Diseases and Operations," published by the American Medical Association.

TECHNIQUE IN TRAUMA, PLANNED TIMING IN TREATMENT OF WOUNDS INCLUDING BURNS—From Montreal General Hospital and McGill University, by Fraser B. Gurd, M. D., C. M. and F. Douglas Ackman, M. D., C. M. In Collaboration with John W. Gerrie, M. D., C. M., Edward S. Mills, M. D., C. M., Joseph E. Pritchard, M. D., Frederick Smith, M. D. Preface by John S. Lockwood, M. D., University of Pennsylvania, with commentary by Ralph R. Fitzgerald, M. D., C. M., McGill University. J. B. Lippincott, Philadelphia, Publishers. Price $2.00.

The management of the victims of burns has always been one of the major problems of surgical experience in both military and civilian life.

The present strife has proven the tannic acid method of Davidson is inadequate to cope with the serious destruction of tissue by modern war weapons. The authors have devised the most modern treatment and the basic principles advanced by them have now received wide support, consequently this book should be in the library of all practicing physicians.

VIRUS DISEASES IN MAN, ANIMAL AND PLANT—By Gustav Seiffert. A survey and report covering the major research work done during the last decade. Translated by Marion Lee Taylor, Ph. D., copyright by The Philosophical Library Inc., New York. F. Huber and Co., New York, Publishers.

In the present work the attempt is made to give a survey of the momentary status of virus investigation with special consideration of the most recent literature, especially foreign. The most important virus diseases of man, animals and plants have been discussed. The aim of the author is to furnish an introduction for the many who wish to occupy themselves more closely with the virus problem, to make possible by reference to literature further penetration into the subject.

TROPICAL NURSING—By A. L. Gregg, M. D., M. Ch., D. T. M. and H., London. Member of Associated Staff of and Lecturer to Nurses at Hospital for Tropical Diseases, London, Lecturer on Tropical Diseases. Westminster Hospital Medical School. Second Edition. Philosophical Library, Publishers. 15 E. 40th Street, New York. Price $3.00.

There are many books on nursing and some aspects of nursing are the same whether in the tropics or elsewhere. Yet the nurse who has not understood the difference between the conditions of everyday life in tropical countries and those in a temperate climate will find much of her work and knowledge nullified.

In these days especially she may be called upon in remote districts, having no doctor within many miles, to deal with and even diagnose diseases which she has never had a chance to study in the course of her training, such as Beriberi or Blackwater Fever.

For this purpose in particular, of giving the nurse this required mental equipment which she needs, has this book been written.

Added value has been given to this book by inclusion of a special section devoted to personal hygiene in the tropics. In bringing health to others the first essential is that a nurse shall herself be healthy, and a careful study of this section will go far towards safeguarding her from the many pitfalls into which she can so easily stumble in unhygienic tropical countries.

Finally, there is a glossary which should prove not the least useful of the contents of this unusual book.

The size of the book is handy, slightly smaller than the Readers' Digest format.

THE TREATMENT OF PEPTIC ULCER—By George J. Heuer, M. D., Professor of Surgery, Cornell University Medical College, Surgeon-in-Chief, New York Hospital. J. B. Lippincott Company, Philadelphia, Publishers. Price $3.00.

This book is the first careful study of the experiences of one surgical clinic in the treatment of peptic ulcer over a ten-year period and includes the study of 1139 case histories, which is a valuable aid in diagnosis and treatment of this disease. Its value is enhanced through the able editorship of Dr. Heuer, assisted by Drs. Cranston Holman and William A. Cooper, well known in their own right, now in active service.

In a disease, the etiologic factors of which are still obscure and the treatment of which is less than satisfactory, the repeated study and discussion of controversial matters are, at pres-

ent, the most promising methods of arriving at a better understanding of its management. For these reasons this monograph will appeal to the surgeon, the general practitioner, the gastroenterologist as well as to the specialist in peptic ulcer.

GLOBAL EPIDEMIOLOGY, A GEOGRAPHY OF DISEASE AND SANITATION: By James Stevens Simmons, B. S., M. D., Ph. D., Dr. P. H., Sc. D. (Hon.) Brigadier General U. S. Army Preventive Medical Service, Office of the Surgeon General, U. S. Army, Lecturer, Department of Preventive Medicine, Johns Hopkins, Yale, Harvard, George Washington University School of Medicine.

Tom F. Whayne, A. B., M. D., Lieut. Colonel M. C., A. U. S. Formerly Director, Medical Intelligence Division, Preventive Medicine Service, Office of Surgeon General U. S. Army, Gaylord West Anderson, A. B., M. D., Dr. P. H., Lieut. Col., M.C., A.U.S., Director, Medical Intelligence Division, Preventive Medicine Service Office, Surgeon U. S. Army, Director School Public Health, University of Minnesota. Harold Maclachian Horak, B. S., M. D., Major, M. C., A. U. S., Instructor in Medicine, Duke University School of Medicine, Dissemination Branch, Medical Intelligence Division and Collaborators. Volume I, Part I: India and the Far East, Part 2; The Pacific Area. J. B. Lippincott, Philadelphia, Publishers. Price $7.50.

This monograph will become one of the classics of medicine and may be described as an excursion into the unexplored field of geomedicine bringing together in one place modern data on medical health and sanitary conditions of various geographic areas of the world. The material is based on recent studies made by the Medical Intelligence Division, Preventive Medicine Service, Office of the Surgeon General, U. S. Army.

This book is very timely because tropical diseases are proving to be of the greatest importance not only in the Army and Navy during this global war, but also because these diseases will acquire significance in the civilian population after the Armed Forces return.

MICROSCOPIC TECHNIQUE IN BIOLOGY AND MEDICINE—By E. V. Cowdry, Professor of Anatomy, Washington University and Director of Research, The Barnard Free Skin and Cancer Hospital. The William and Wilkins Company, Baltimore, Maryland, Publishers. Price $4.00.

The concise new book by a leading investigator anticipates and meets the demands of workers in biology and medicine interested in the minute structure of things.

It provides definite information about specific matters rather than general statements.

You may turn to structures with which you are concerned, to elements, enzymes and other components of living material that can be localized microscopically.

For many techniques information is also supplied under the names of those who discovered them. Synonyms for dyes are listed.

Alphabetical arrangement makes all information directly and quickly accessible. References are included for follow up.

POLIOMYELITIS by Edward C. Rosenow, Professor of Experimental Bacteriology, Mayo Foundation For Medical Education and Research, University of Minnesota, Rochester. Volume A-44, Published by the International Bulletin, W. L. Colze, M. D., Editor, 319 W. 103rd Street, New York City, 25.

This volume has just left the press and is a monograph on the work the author did while at the Mayo Clinic and gives for the first time a complete summary of this work and represents the findings of twenty seven years of painstaking research and gives a complete, comprehensive and authoritative account of his significant achievements.

For the first time scientists and physicians have access in a complete volume the work of this author on the disputed etiology of this disease.

PRINCIPLES AND PRACTICES OF INHALATION THERAPY: By Alvan L. Barach, M. D., Associate Professor of Cinical Medicine, Columbia College of Physicians and Surgeons, Assistant Attending Physician, Presbyterian Hospital, New York. 59 illustrations. Published by J. B. Lippincott Company, Philadelphia. Price $4.00.

This handbook on inhalational therapy will be useful to those responsible for the therapeutic use of gases in clinical medicine, and in many phases of war medicine as well. Out of the background of the numerous studies on the pathologic physiology of respiration, here are presented all the last-word technics in the administration of oxygen, helium, carbon dioxide, positive pressure, alternating and equalizing pressure, and the nebulized solutions of various drugs such as epinephrine, neosynephrin, and some of the sulfonamides.

QUICK REFERENCE BOOK FOR MEDICINE AND SURGERY, A Clinical, Diagnostic, and Therapeutic Digest of General Medicine, Surgery, and the Specialties, Compiled Systematically from Modern Literature: By George E. Rehberger, A. B., M. D. Twelfth edition. J. B. Lippincott Company, Philadelphia, Publishers. Price $15.00.

Many new discoveries and developments have appeared in the field of medicine during the four years which have elapsed since the previous edition of this work. The sections on Gynecology and Genito-Urinary Diseases have been entirely rewritten and all other sections have been carefully revised. The List of Drugs has been revised in accordance with the Twelfth Revision of the United States Pharmacopoeia and the Seventh Edition of the National Formulary. The changes made throughout the book have been too numerous to set down in detail, since scarcely a page has gone unchanged. It may, however, be appropriate to mention the fields of Chemotherapy, shock treatment, burns, deficiency diseases, and nutrition, which have changed with bewildering rapidity in the past few years and have had a correspondingly drastic revision. The color plates have been carefully selected. More than half have been added in this edition. It is felt that this new edition is completely up-to-date, and that it will serve the practitioner in his daily work as usefully as did the preceding editions.

REPORT OF THE BARUCH COMMITTEE ON PHYSICAL MEDICINE: Published by the Committee on Physical Medicine, 597 Madison Avenue. New York 22, N. Y.

The Committee of which Ray Lyman Wilbur, M. D., is chairman states it has studied many phases of this problem with considerable diligence. E. J. Jaqua, L.L.D., former president of Scripps College, Claremont, California, has been appointed educational director. This brochure gives a complete outline of the design of the work to be accomplished by this liberal grant of Mr. Baruch.

THE ART OF ANESTHESIA: By Paluel J. Flagg, M. D., visiting Anesthetist to Manhattan Eye and Ear Hospital; Consulting Anesthetist to St. Vincent's Hospital, New York, N. Y.; Consulting Anesthetist to the Woman's Hospital, Sea View Hospital, Jamaica Hospital, Mount Vernon Hospital, Flushing Hospital, Mary Immaculate Hospital, St. Mary's Hospital, Far Rockway, N. Y.; Nassau Hospital, L. I.; Director of Pneumatology, World's Fair, New York City, and Chairman of Committee on Asphyxia of the American Medical Association. Seventh edition, 166 illustrations. J. B. Lippincott Company, Publisher, Philadelphia. Price $6.00.

This book is the work of a pioneer and contributor of the evolution of anesthesia as it has so marvelously developed in the United States, and deals with fundamental principles in the physiological pathology and respiration and circulation; principles which govern the applications and technics of anesthetics, regardless of the birth and decline of new drugs and new methods. The administration of anesthesia is much more than the application of mere laboratory technic; it is one of the most critical branches of therapeutics.

OPERATIONS OF GENERAL SURGERY: By Thomas G. Orr, M. D., Professor of Surgery, University of Kansas School of Medicine, Kansas City, Kansas. 723 pages with 1396 step-by-step illustrations on 570 figures. Philadelphia and London: W. B. Saunders Company. 1944. Price $10.00.

The author has given us a splendid book on surgery in a convenient size volume. The book is up to date and useful not only to the general surgeon but to the surgeon and practitioner called upon to do surgery beyond their normal practice as a result of added war time responsibility.

Operative technic plus surgical management of the patient, indications for operation, surgical anatomy, dangers and safeguards, pre-and postoperative care are given in great detail, surgical emergencies receive due attention.

NEWS ITEMS

Paul L. Dent, Major, Medical Corps, United States Army, was awarded a Bronze Star Medal by Lieut. General Mark W. Clark, for meritorious service in combat during the period January 13 to May 15, 1943. Major Dent (then Capain) served as operating surgeon in charge of a general surgical team in the Tunisian Campaign. During this period he always kept his team in the closest possible proximity of the front to permit the speedy performance of major surgery on battle casualties. He accomplished his task despite difficulty in transportation and hastily prepared operating room facilities. Major Dent provided the motivating force which guided his team in its highly successful care of approximately two hundred seriously wounded battle casualties, many of whom probably would not have recovered but for the treatment at his advanced station. His performance was vital in pioneering the principles upon which major surgery in the forward areas is now based. He entered military service from Louisville.

Tantalum plates, foil, screws and wire to repair broken bones, nerves and skulls will shortly be available to civilian surgeons through a recent allocation of the War Production Board, according to an announcement made by Dr. Gustav S. Mathey, President of the Johnson & Johnson Research Foundation, New Brunswick, New Jersey.

The Johnson & Johnson Research Foundation is a non-profit organization, founded in 1943 to endow research in universities and hospitals and to disseminate summaries of findings to members of the medical profession. Dr. Mathey states that by an agreement between the Ethicon Suture Laboratories, Johnson & Johnson subsidiary, and the Fansteel Metallurgical Corporation of North Chicago, the availability of tantalum for civilian surgeons is assured at an early date.

Tantalum has assisted surgeons to return to active life many cases which in the last war would have been disfigured and incapacitated for life. Lost portions of the skull, ears, noses and other parts of the face are being replaced with tantalum. One veteran has a tantalum "belly wall." Nerves which control motion in arms and legs are stitched with tantalum thread and protected while healing with tantalum cuffs. Facial paralysis is relieved by small, saddle-shaped pieces of tantalum and wire used to pull the corners of the mouth to a normal position. This stops the unpleasant drooling and facial distortion which go with the condition. Cleft palates also are being corrected.

James Thomas Gilbert, Jr., M. D., Bowling Green, who was commissioned Captain in the Medical Corps in June 1942, has been promoted to Major. Prior to entering the Army Medical Corps, Major Gilbert practiced his profession in Bowling Green where he was a member of the Graves-Gilbert Clinic.

Courage and Devotion Beyond the Call to Duty: Through the cooperation of Mead Johnson & Company, $40.000 in War Bonds are being offered to physician-artists (both in civilian and in military service) for art works best illustrating the above title.

This contest is open to members of the American Physicians Art Association. For full details, write Dr. F. H. Redewill, Secretary, Flood Building, San Francisco, California.

Lieutenant Commander Harper Richey, Louisville, who has been in the Russell Islands in the South Pacific where he was in charge of a mobile hospital, has returned to his home where he is convalescing from an operation.

The American College of Surgeons which was to have held its annual meeting in Chicago October 24-27 has cancelled this meeting after consultation with Army and Office of Defense Transportation officials in Washington.

Major John T. Bate is Chief of the Orthopedic Section, Station Hospital, Camp Rucker, Ala. He previously served in this capacity at Thayer General Hospital, Nashville, Tenn.

The American Board of Obstetrics and Gynecology announces the next written examination and review of case histories (Part I) will be held in various cities of the United States on Saturday, February 3, 1945 at 2 P. M. All applications must be in the office of the Secretary by November 15, 1944. For further information and application blanks, address Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh 6, Pa.

Lieutenant Colonel R. Glen Spurling, Louisville, who is on leave of absence from the faculty of the University of Louisville School of Medicine is senior consultant in neurological surgery on the E. T. O. headquarters staff.

Willard C. Shepard, Chicago, one of the foremost contemporary American medical artists has been appointed Art Editor of W. B. Saunders Company, Philadelphia, publishers to the medical, dental, nursing and allied professions. W. B. Saunders Company has been a front page advertising contributor to the Journal over a period of thirty-six years.

Six unretouched color photographs to aid physicians diagnose vitamin deficiencies are included in the second series of "Iconography of Vitamin Deficiencies" issued to the medical profession by the Winthrop Chemical Company, Inc. The photographs were made at the Nutrition Clinic, Hillman Hospital, Birmingham, Ala., through the courtesy of Dr. Tom D. Spies, director, 205 East 42nd Street, New York 17, N. Y., and can be secured by the asking.

The National Foundation for Infantile Paralysis announces the 1944 epidemic reached its peak the week of September 2nd in which were reported 1,683 cases. The total number for the year up to September 9th was 10,959 cases, which were more cases for a comparable period than at any time since America's worst epidemic in 1916.

The National Foundation sent out seven doctors, fifty physical therapists and more than seven tons of wool as well as emergency financial relief.

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COUNTY SOCIETY REPORTS

Boyd: The regular meeting of the Boyd County Medical Society was held on September 6th at the Henry Clay Hotel. Leslie Urban presided in the place of Proctor Sparks as the latter was called away from the meeting. The program was devoted to the discussion of poliomyelitis in view of the recent epidemic in Kentucky. Dr. Price Sewell discussed the symptoms, diagnosis, and epidemiology of poliomyelitis and H. K. Bailey discussed the periodicity of epidemics. Harry Stambaugh discussed the relation of poliomyelitis to tonsillectomy. No further business was brought up and the meeting was adjourned.

Price Sewell, Jr., Secretary.

Campbell-Kenton: The regular meeting of the Campbell-Kenton County Medical Society was held at St. Elizabeth Hospital on June 8, 1944 with eight members and three guests present. The meeting was called to order by the president, O. W. Frickman at 9:20 P. M.

The program consisted of two very interesting papers.

Russell E. Teague spoke on "The Newer Treatments of Venereal Diseases."

Fred Caudill discussed "What We Gain by Reporting Cases of Communicable Diseases."

A card from R. E. Wehr concerning emergency orders for Biologicals.

The following doctors having been approved by the Board of Censors were unanimously elected to membership: W. A. Foertmeyer, John T. Batte, Harry F. Mann.

There being no further business, the meeting was adjourned.

Robert L. Biltz. Secretary.

Campbell-Kenton: The regular monthly meeting of the Campbell-Kenton County Medical Society was held at the Campbell County Health Center with 24 members and 6 guests present. The meeting was called to order by the president, O. W. Frickman at 9:05 P. M. The minutes of the previous meeting were read and approved.

The following communications were read: A letter from Mrs. Anna M. Quigley requesting the Medical Society to work out a "program" to bestow special honors on the local doctors of Campbell-Kenton County in conjunction with a benefit show for the Navy Mothers Club. On a motion by Dr. Heiselman the society voted to thank the Navy Mothers Club, but declined to participate as it might be misconstrued as unethical advertising.

A letter from Joshua B. Everett outlining the procedure for making a formal application to obtain one of the five tuberculosis sanatoriums in northern Kentucky.

The program of the evening consisted of a discussion on Cancer Control.

Dr. William Miner outlined the work that has been done locally to further the establishment of a cancer clinic at Booth Hospital. A temporary committee consisting of J. D. Northcutt, Chairman, Luther Bach, Vice chairman and Mrs. Kathryn Haley, Secretary, was selected. On motion of William Miner the selection of the committee was approved by the society with instructions to notify Guy Aud of the action.

P. E. Blackerby explained the part the State organization would play in the cancer control service. He then introduced F. Van Meter, who gave an interesting resume of the work being done in Lexington on cancer control.

A general discussion followed.

The following delegates and alternates were elected for one year to the state meeting; Delegates: H. C. White, N. A. Jett, R. E. Wehr, John Dawson and William R. Miner.

Alternates: Luther Bach, Chester Morris, Ed Smith, J. A. Caldwell and J. H. Caldwell.

There being no further business the meeting was adjourned.

Robert L. Biltz, Secretary.

Four County Medico-Dental Society: The Four County Medico-Dental Society, composed of physicians and dentists residing in Caldwell, Crittenden, Lyon and Trigg counties, met at Eddyville on Tuesday night, August 29, 1944, and following supper, served by the ladies of the Methodist church, an interesting program was rendered.

In the absence of both the President and Secretary, E. N. Futrell, Cadiz, acted as President and W. C. Haydon, Princeton, as Secretary. The program had been arranged by C. P. Moseley, Eddyville, and consisted of a discussion of "The Medical Set-up in the Army" by Capt. Albritton, Medical Corps, U. S. Army, Camp Campbell, and a discussion of "Treatment of Diabetes" by Major A. D. Kenneday, Medical Corps, U. S. Army, Camp Campbell. A general discussion followed.

In addition to the Essayists, the following attended: T. Atchison Frazer, L. A. Crosby, Perry J. Frazer, Marion; G. E. Hatcher, Cerulean; E. N. Futrell, Cadiz; D. J. Travis, C. P. Moseley, T. W. Lander, Eddyville; T. L. Phillips, Kuttawa; I. Z. Barber, W. C. Haydon, Princeton.

The next meeting will be held in Cadiz, Trigg county, on the fourth Tuesday in November, with Dr. Hatcher, of Cerulean, in charge of the program.

W. L. Cash, Secretary.

Jefferson: There was no meeting of the Jefferson County Medical Society during the month of September due to Labor Day on Monday the 4th and the Kentucky State Medical Association meeting which opened in Lexington on Monday, September 18th. The next meeting of the Society will be on Monday night, October 16th. For the duration the society has voted to meet only once a month.

Richard T. Hudson, Secretary

Scott: The regular monthly meeting of the Scott County Medical Society was called to order by the President, L. F. Heath at the John Graves Ford Memorial Hospital in Georgetown. Those present were Drs. L. F. Heath, Crutchfield, Ammerson. Smith, Roberts, Allphin, Barlow and Johnson.

After a delightful dinner served by the hospital, minutes of the previous meeting were read and approved. Moved and seconded that we pay the hospital one dollar a plate for our meals, carried.

Moved and seconded that Ralph Lake, who has paid his dues for 1944, be carried on our roll as a regular member in good standing, carried.

The Secretary read a note of thanks from the family of the late D. B. Knox, for our expression of sympathy in their recent bereavement.

Members were again notified of the State Medical Meeting to be held in Lexington, September 18, 19, 20 and all members urged to be present.

Proper credentials for our delegate and alternate have been sent in to the State Society.

There being no further business the Society adjourned to meet the first Thursday in October.

H. V. Johnson, Secretary

Clearly, the programs, for rehabilitating the tuberculous are in their initial stages of development. Many successful but isolated rehabilitation projects, for a decade or more, have been acting as beacons lighting up the course along which a national effort in this sphere may proceed. A comprehensive and coordinated national rehabilitation program is required. Without it, the effectiveness of mass case-finding campaigns and of subsequent sanatorium treatment is in considerable measure, vitiated, and the disease remains a needlessly large drain upon the resources of the nation—Louis E. Stiltzbach, M. D.



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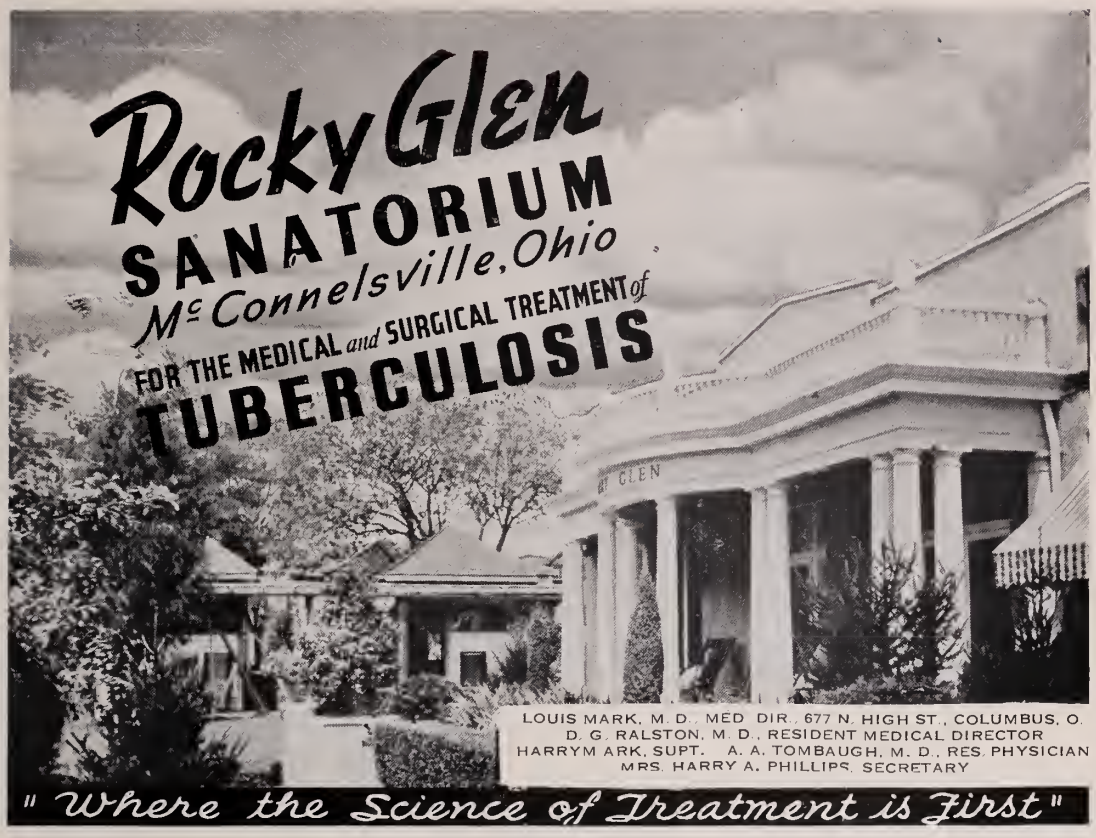
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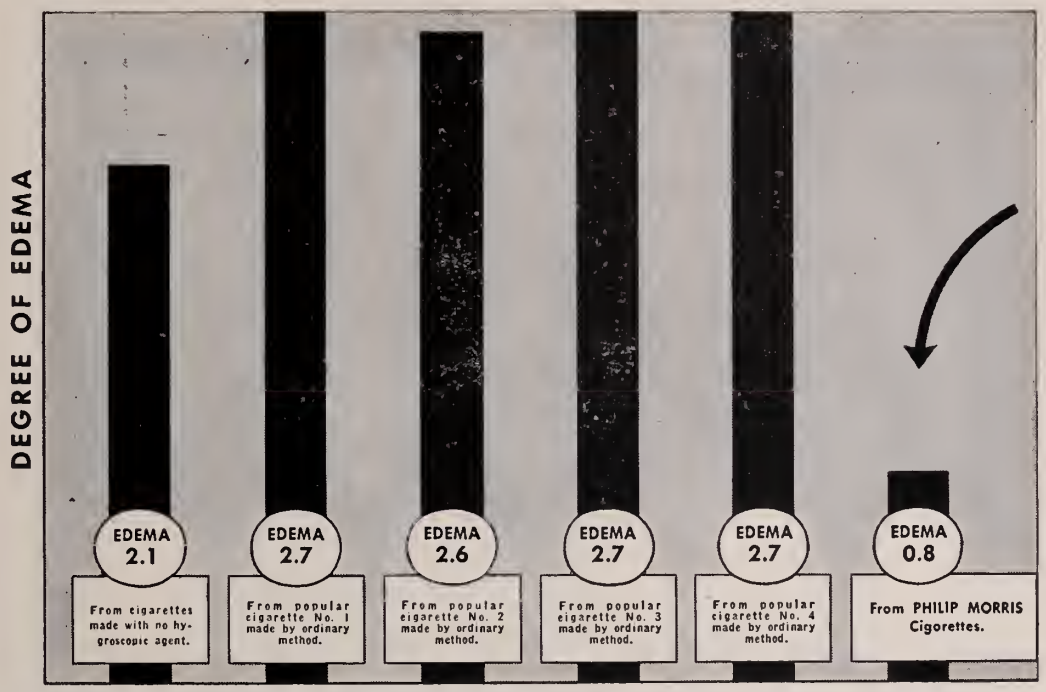
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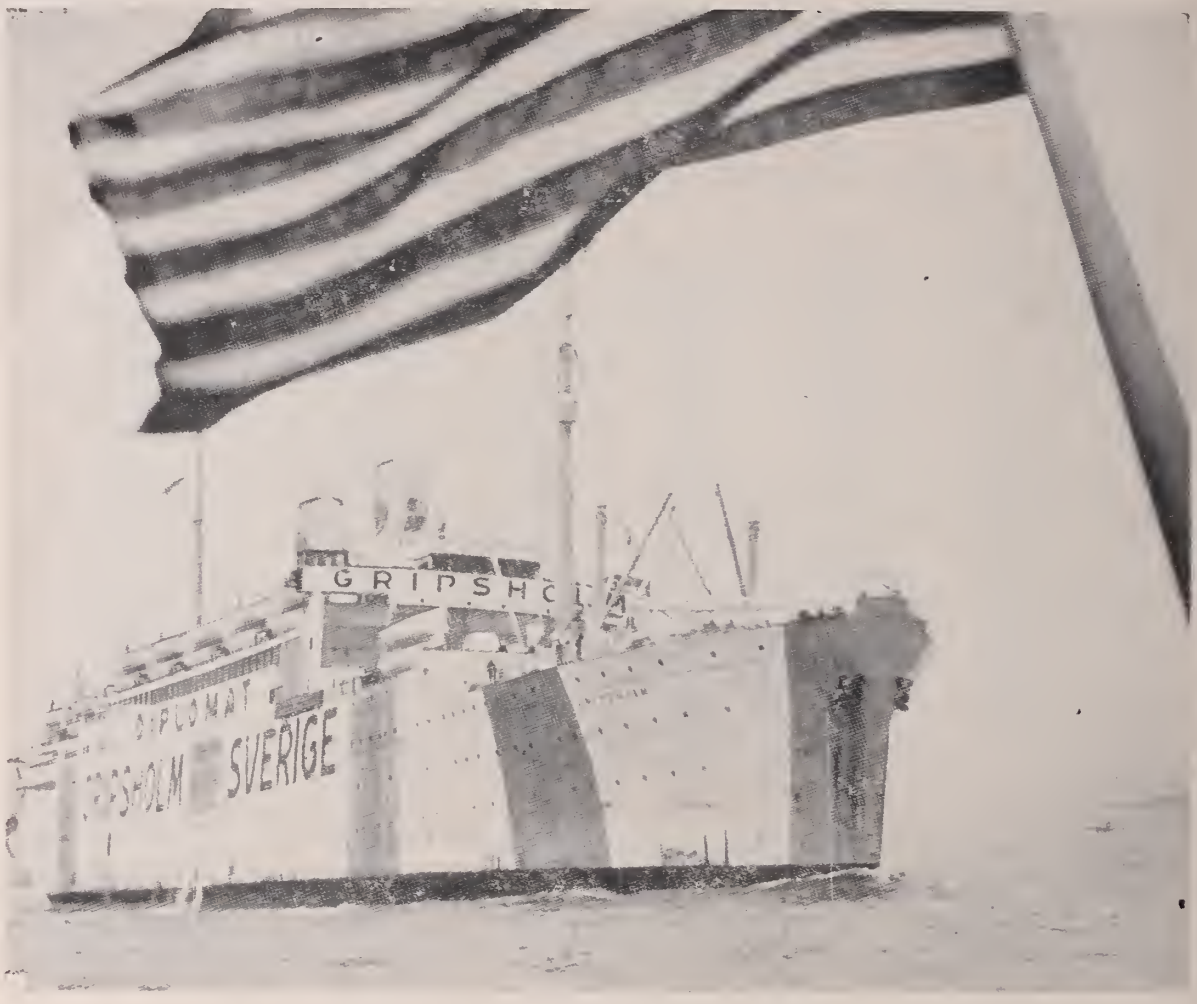
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*N. Y. State Journ. Med. 35 No. 11,590 **Laryngoscope 1935, XLV, No. 2, 149-154

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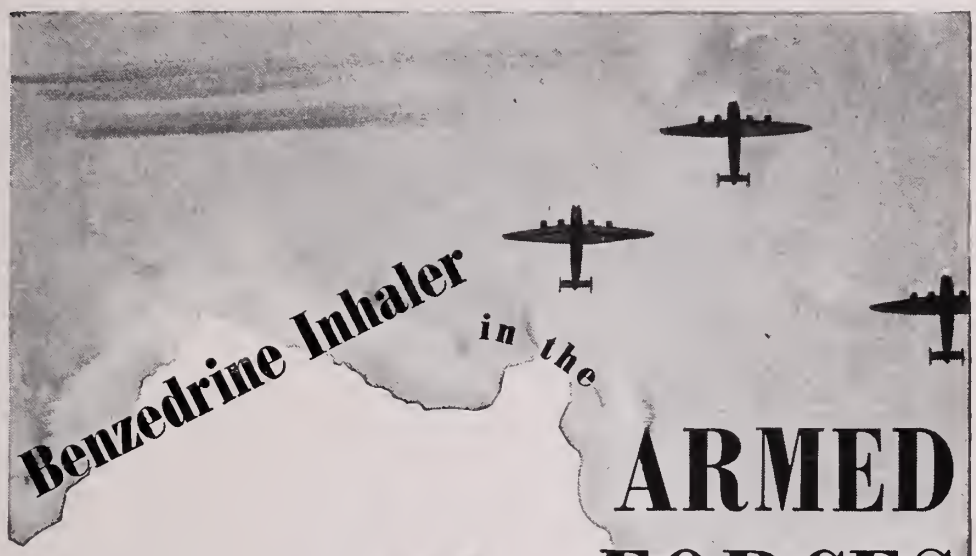
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*R. H. Follis, D. Jackson, M. M. Eliot, and E. A. Park: Prevalence of rickets in children between two and fourteen years of age, Am. J. Dis. Child. 66:1-11, July 1943.

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VOL. 42, No. 11 | BOWLING GREEN, KY. | NOVEMBER, 1944

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1. Fauley, G. B., Freeman, S., Ivy, A. C., Atkinson, A. J. and Wigodsky, H. S.: Aluminum Phosphate in the Therapy of Peptic Ulcer, Arch. Int. Med., 67:563-578 (Mar.) 1941.
2. Cornell, A., Hollander, F. and Winkelstein, A.: The Efficacy of the Drip Method in the Reduction of Gastric Acidity, Am. J. Digest. Dis., 9:332-338 (Oct.) 1942.
3. Winkelstein, A., Cornell, A. and Hollander, F.: Intragastric Drip Therapy for Peptic Ulcer; Summary of 10 Years' Experience, J.A.M.A., 120:743-745 (Nov. 7) 1942.
4. Upham, R., and Chaikin, N. W.: A Clinical Investigation of Aluminum Phosphate Gel, Rev. of Gastroenterol., 10:287-297 (Nov.-Dec.) 1943.
5. Lichstein, J., Simkins, S. and Bernstein, M.: Aluminum Phosphate Gel in the Treatment of Peptic Ulcer. Am. J. Digest. Dis. In Press.



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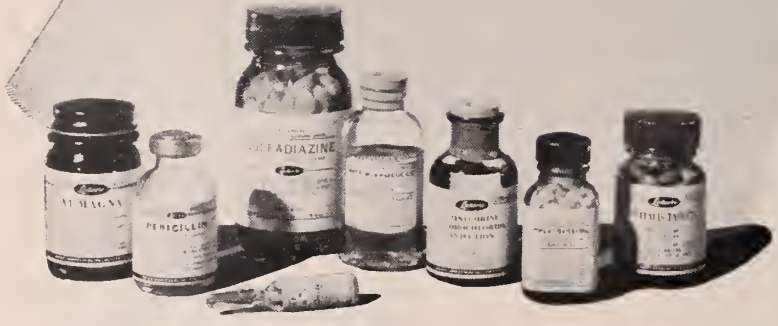
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Reprint available on cigarette research—Archives of Otolaryngology, March, 1943, pp. 404-410, Camel Cigarettes, Medical Relations Division, One Pershing Square, New York 17, N. Y.

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". . . at least from 200 to 300 grams of protein is needed for replacement alone. One must give the patient as much food as he can take . . . give him a good protein, one that contains all of the essential amino acids." (Elman, R.: Physiologic Problems of Burns, J. Missouri M. A. 41:1 [Jan.] 1944.)

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Arch. Otolaryng., 39:109-123, 1944.

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Ballard	F. H. Russell	Wickliffe	
Warren	C. R. Markwood	Glasgow	November 15
Bath	H. S. Gilmore	Owingsville	November 13
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Calloway	J. A. Outland	Murray	
Campbell-Kenton	Robt. L. Biltz	Newport	November 2
Carlisle	E. E. Smith	Bardwell	November 7
Carroll	H. Carl Boylen	Carrollton	
Carter			November 14
Casey	Wm. J. Sweeney	Liberty	November 23
Christian	William F. Fidler	Hopkinsville	November 21
Clark	W. Carl Grant	Winchester	November 17
Clay	L. H. Wagers	Manchester	
Clinton	S. F. Stephenson	Albany	November 18
Crittenden	C. G. Moreland	Marion	November 11
Cumberland	W. F. Owsley	Burkesville	November 1
Daviess	Frank J. Condon	Owensboro	November 14 & 28
Estill	Virginia Wallace	Irvine	November 8
Fayette	Chas. D. Cawood	Lexington	November 14
Fleming	Roy Orsburn	Flemingsburg	November 8
Floyd	Robert Sirkle	Weeksbury	November 29
Franklin	E. K. Martin	Frankfort	November 2
Fulton	John G. Samuels	Hickman	November 8
Gallatin	J. M. Stallard	Sparta	
Garrard	J. E. Edwards	Lancaster	November 16
Grant			
Graves	H. H. Hunt	Mayfield	November 7
Grayson	E. B. Deweese	Caneyville	
Green	S. J. Simmons	Greensburg	November 6
Greenup	Virgil Skaggs	Russell	November 10
Hancock	F. M. Griffin	Hawesville	
Hardin	D. E. McClure	Elizabethtown	November 9
Harlan	W. R. Parks	Harlan	November 18
Harrison	W. B. Moore	Cynthiana	November 6
Hart	Vincent Carrao	Munfordville	November 7
Henderson	Walter L. O'Nan	Henderson	November 13 & 27
Henry	Owen Carroll	New Castle	November 9
Hickman	H. E. Titsworth	Clinton	November 2
Hopkins	Wm. H. Garnier	Madisonville	November 9
Jefferson	Richard T. Hudson	Louisville	November 6 & 20
Jessamine	J. A. Van Arsdall	Nicholasville	November 23
Johnson	Paul B. Hall, Act. Sec.	Paintsville	November 27
Knox	T. R. Davies	Barbourville	November 16
Laurel	Oscar D. Brock	London	November 8
Lawrence	L. S. Hayes	Louisa	November 20
Lee	A. B. Hoskins	Beattyville	November 11
Letcher	Owen Pigman	Whitesburg	November 28
Lewis	Elwood Esham	Vanceburg	November 20
Lincoln	Lewis J. Jones	Houstonville	November 17
Livingston	T. M. Radcliffe	Smithland	
Logan	E. M. Thompson	Russellville	
Lyon	H. H. Woodson	Eddyville	November 7
McCracken	Leon Higdon	Paducah	November 22
McCreary	R. M. Smith	Stearns	November 6
McLean	F. L. Johnson	Livermore	November 9
Madison	Charles J. Grubin	Richmond	November 16
Magoffin	Lloyd M. Hall	Salyersville	

COUNTY	SECRETARY	RESIDENCE	DATE
Marion	Nelson D. Widmer	Lebanon	November 28
Marshall	S. L. Henson	Benton	November 15
Mason	J. A. Campbell, Act. Sec.	Maysville	November 8
Menifee			
Mercer	J. Tom Price	Harrodsburg	November 14
Metcalfe	E. S. Dunham	Edmonton	
Monroe	Corinne Bushong	Tompkinsville	
Montgomery	D. H. Bush	Mt. Sterling	November 14
Muhlenberg	E. L. Gates	Greenville	November 14
Nelson	W. Keith Crume	Bardstown	
Nicholas	T. P. Scott	Carlisle	November 15
Ohio	Oscar Allen	McHenry	November 1
Owen	K. S. McBee	Owenton	November 2
Owsley	W. H. Gibson	Booneville	November 6
Perry	J. P. Boggs	Hazard	November 13
Pike	S. B. Casebolt	Pikeville	November 2
Powell	I. W. Johnson	Stanton	November 6
Pulaski	Robt. G. Richardson	Somerset	November 9
Robertson	L. T. Lanham	Mt. Olivet	
Rockcastle	Robt. G. Webb	Livingston	November 3
Rowan	I. M. Garred	Morehead	November 13
Russell	J. R. Popplewell	Jamestown	November 13
Scott	H. V. Johnson	Georgetown	November 2
Shelby	C. C. Risk	Shelbyville	November 16
Simpson	N. C. Witt	Franklin	November 14
Spencer			
Taylor	L. S. Hall	Campbellsville	November 9
Todd	B. E. Boone, Jr.	Elkton	November 1
Trigg	Elias Futrell	Cadiz	
Union	E. Bruce Underwood	Morganfield	November 7
Warren-Edmonson	Paul Q. Peterson	Bowling Green	November 8
Washington	J. H. Hopper	Willisburg	November 15
Wayne	Mack Roberts	Monticello	
Webster	C. M. Smith	Dixon	November 24
Whitley	C. A. Moss	Williamsburg	November 2
Wolfe	John L. Cox	Campton	November 6
Woodford	George H. Gregory	Versailles	November 2

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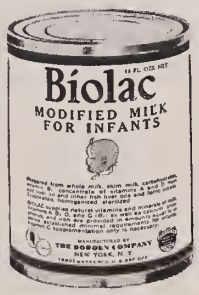
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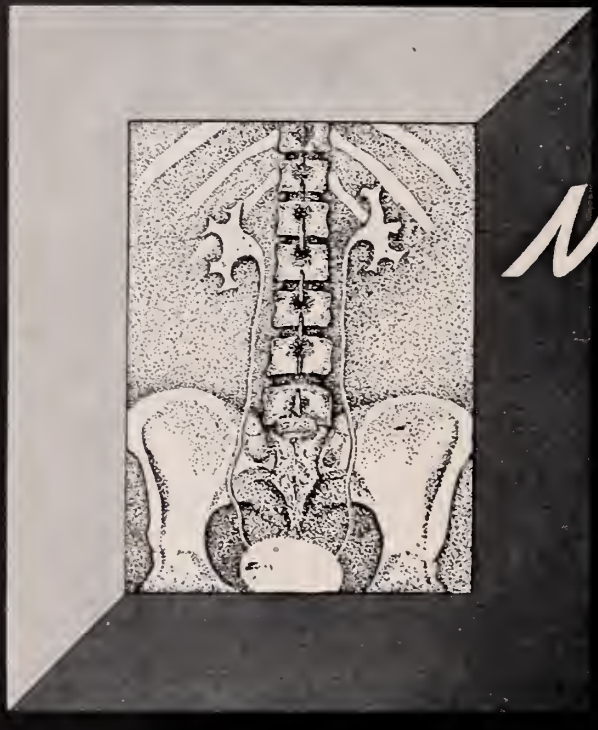
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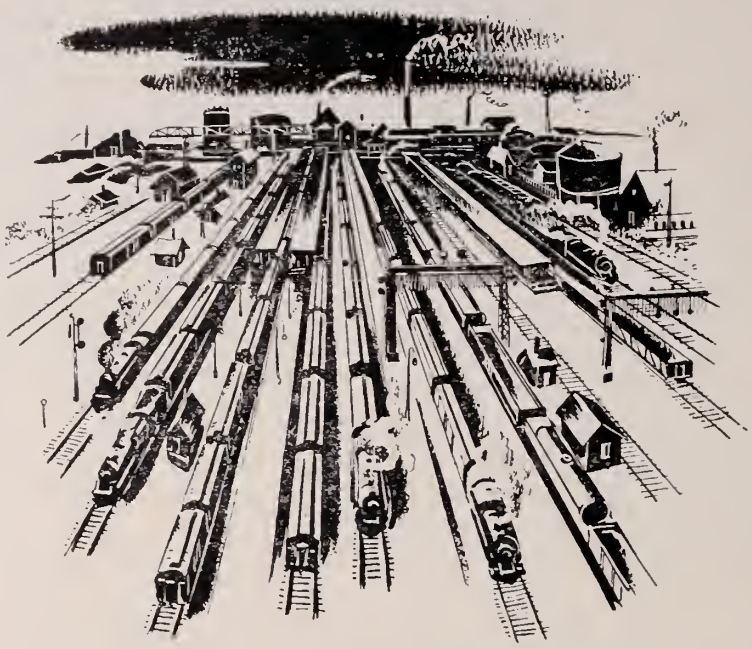
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KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KEN TUCKY STATE MEDICAL ASSOCIATION

Published Under the Auspices of the Council

VOL. 42, NO. 11 BOWLING GREEN, KY. NOVEMBER, 1944

THE ANNUAL MEETING

The 1944 Annual Meeting of the Kentucky State Medical Association is now history. It was a success in a very great way. The attendance was unusually good, registration totaling more than 400. The universal sentiment of those present was that the Scientific Sessions, contributed to by some of the most outstanding medical men in the military forces and in civilian life in this country, were of extraordinary interest. It may be stated again that the War-time Medical Meetings, as illustrated in the two sessions, 1943 and 1944, will stand as monuments to the good judgment of the leaders in the American Medical Association, The American College of Surgeons, and The American College of Physicians, which promoted these programs.

The meetings of the House of Delegates were also well attended, and its programs were carried out not only successfully but in complete harmony in every respect. The following officers were elected to serve the Association during the next year:

Dr. Oscar O. Miller, Louisville, succeeded to the Presidency.

Dr. J. Watts Stovall, Grayson, was made President-Elect.

Dr. K. S. McBee, Owenton, was elected Vice-President to represent the Eastern Section of the State; Dr. C. V. Hiestand, Campbellsville, was elected Vice-President to represent the Western Section of the State; Dr. Walter I. Hume, Louisville, was elected Vice-President for the Louisville Section.

Dr. J. B. Lukins, Louisville, was re-elected Delegate to the American Medical Association for a term of two years; Dr. Clark Bailey, Harlan, was elected Delegate to the American Medical Association to fill the unexpired term of the late Doctor Virgil Simpson (one year).

Dr. Richard T. Hudson, Louisville, was chosen to deliver the Oration in Surgery at the Annual Scientific Session in 1945. Dr. D. G. Miller, Jr., Morgantown, was chosen to deliver the Oration in Medicine at the 1945 Annual Session.

The following councilors were re-elected for continuing services on the Council of the State Association:

Dr. J. B. Lukins, Fifth District, Dr. Proctor Sparks, Ninth District, Dr. H. K. Buttermore, Eleventh District.

THEY GAVE THEIR ALL

Six patriotic sons of Kentucky, honored members of our profession, have laid down their lives on the altar of their country. Animated by the spirit of service which prompted more than five hundred other Kentucky physicians to enter the Armed Forces, they have made the supreme sacrifice. They will be sorely missed from our ranks, but the manner in which they met death will serve to inspire alike their brothers in arms and those of us whose job it is to keep the professional home fires burning. Each has a gold star to his memory on the Service Flag of the Kentucky State Medical Association, and this issue of the Journal carries a memorial obituary of each of these doctor heroes:

Capt. Ellis Saunders Allen, Jr., Louisville.
Capt. Courtland Beeler, Louisville.
Lt. John Reed Brosheer, Middlesboro.
Capt. Morton Cundiff, Somerset.
Lt. Fred H. Greenwell, New Haven.
Capt. Walter O. McCammon, Springfield.

In honoring these Kentucky physicians who gave their all for the preservation of the principles and privileges we cherish so highly, we also honor ourselves. They lived, they loved, they served, they sacrificed. We who survive the tragedies of this war must and will carry on, encouraged by the memories of those who died in a great cause and by the knowledge that their professional and patriotic services have further enriched the glorious traditions of our profession.

To the families who gave to Kentucky Medicine and to their country's service these six young men, the Kentucky State Medical Association extends its sincerest sympathy, with the assurance of its pride and its gratitude for representatives who have so worthily upheld the high principles and traditions of Kentucky Medicine.

In Memoriam



Capt. Ellis Saunders Allen, Jr.
1908-1944

Captain Ellis Saunders Allen, Jr., son of Dr. and Mrs. E. S. Allen, was born July 20, 1908, in Louisville. After grade school he entered the Louisville Male High School, graduating at mid-year of 1926. The following spring he attended the McCallie School at Chattanooga, Tenn.

In the fall of 1926 he matriculated at Hampden-Sydney College, Virginia. In 1930 he won his degree of Bachelor of Science and graduated *cum laude*.

He returned to Louisville for his medical course and graduated in the class of 1934. He interned at the Louisville City Hospital. He worked one summer at the Presbyterian Hospital, New York City, and visited all the principal clinics in the United States and Canada.

He was associated in surgery with his father, Dr. E. S. Allen, Louisville. He was on the staff of the Kentucky Baptist Hospital, the Methodist Deaconess Hospital; was active in the Surgical Out-patient Department of the Louisville City Hospital, on the staff of the Children's Free Hospital, the Pee Wee Valley Hospital, The King's Daughters Hospital, Shelbyville. He had charge of the free clinic at the Cabbage Patch Settlement and was surgeon for the All Prayer Foundling Home. He was a fellow of the American College of Surgeons and the South Eastern Surgical Congress and of other societies, local and national.

Dr. Allen entered the services of the army in May, 1941 and was stationed at O'Reilly General Hospital, Springfield, Mo. In July, 1943, he was honorably discharged, following a major operation. After treatment at the Memorial Hospital, New York City, he seemed to be making excellent progress. During the Christmas holidays he was motoring to Florida when he became suddenly ill and was rushed to St. Vincent Hospital in Jacksonville, Florida, where he underwent another operation from which he did not rally.

Early in life Dr. Allen made a profession of faith in Christ and remained unwavering in his loyalty, confirming it again in his last conscious moments. Endowed with an exceptionally equable disposition, he had many friends and few, if any, enemies. His scope of interests included outdoor sports, of which football was his favorite, having played it during all his high school and college days; golf, in which he won many honors. Amateur photography was also a hobby.

He was a member of the Theta Chi fraternity, the Chi Chi medical fraternity, the Y. M. C. A., the Gideons, the Louisville Country Club, the Pendennis Club and others.

Captain Courtland Beeler was born at Glen Dean, Kentucky, January 10, 1902, but spent the greater part of his life in Louisville. His parents were Courtland and Eliza Sutherland Beeler. He was graduated from Louisville Manual High School, in 1920 and he attended University of Louisville for his two years premedical education. He was graduated from the University of Georgia Medical School in Augusta, Ga., June, 1927 and served one year internship at University Hospital, Augusta. He was a member of Gamma Kappa Chapter, Theta Kappa Psi. He practiced in Edgefield, S. C., for the



CAPTAIN COURTLAND BEELER
1902-1944

following four years. In July, 1932 he re-entered University Hospital as assistant in Surgery. A part of the year was spent as House Surgeon, due to the resignation of the acting surgeon. In July, 1933 he returned to Louisville to do general medicine and surgery. He volunteered for military service and was commissioned a Captain, June 1, 1942. He reported for duty at LaGarde Hospital, New Orleans, Louisiana, July 1, 1942. After a month he was sent to Iceland with the 208th General Hospital. In Auguust, 1943 he was transferred to the 168th Station Hospital and sent to England. It was there he passed away April 9th, 1944, of coronary thrombosis which was verified at autopsy.

He was a Mason, a member of Hazelwood Baptist Church, the American Medical Association, Jefferson County Medical Society, Kentucky State Medical Association. He was on the active staff at the Jewish Hospital, and the Courtesy staff of Baptist, St. Joseph, Norton and Deaconess Hospitals. He had a Masonic funeral, the first in that theatre of war.

The following resolutions were passed by the Jefferson County Medical Society:

WHEREAS, recognizing the fact that Doctor Beeler was a war casualty while serving his country, the members of the Jefferson County Medical Society desire to express their highest regard for him personally, and their respect for him as a man, a physician and a soldier.

BE IT RESOLVED that this testimonial be filed in the records of this Society and that copies be sent to the bereaved family with our deepest sympathy in their loss.



LIEUT. JOHN REED BROSHEER
1912-1941

Lieut. John Reed Brosheer was born October 29th, 1912, in Orange, Virginia, the son of J. R. Brosheer and Clintie Curtis Brosheer. His father died about six weeks before he was born.

After the death of his mother in California in 1918, he made his home with his uncle and aunt, Dr. C. K. Brosheer and Mrs. Brosheer, in Middlesboro. After finishing High School in Middlesboro, he attended Berea College and Kentucky Wesleyan College, Winchester, and the University of Louisville, from which he was graduated from the Medical Department June 8, 1937. He served one year as intern at St. Margaret Hospital, Hammond, Ind., after which he practiced with Drs. Brosheer and Brummett of the Middlesboro Hospital in Middlesboro, until he volunteered and entered the Army Medical Air Corps as a 1st Lieutenant in the Fall of 1940, previous to which he had been in the Medical Reserve.

On March 29, 1941 Captain Brosheer was graduated as an Aviation Medical Examiner from Randolph Field, Texas,

after which he was sent to March Field, California. On June 8, 1941, Dr. Brosheer was killed in an airplane accident in California.



CAPTAIN MORTON CUNDIFF
1915-1944

Captain Morton Cundiff, the son of Dr. and Mrs. W. R. Cundiff, Somerset, was born in Stearns and resided there with his parents until 1922 when the family moved to Somerset. He graduated from Somerset High School in 1933 and from the University of Kentucky, Lexington, in 1937. He was graduated from the University of Louisville School of Medicine in 1941 and served his internship at St. Joseph Hospital, Lexington.

Immediately upon completing his internship, he entered the Army in June, 1942, with a lieutenant's commission. He received his training at Maxwell Field, Montgomery, Ala., Randolph Field, Texas, Berry Field, Nashville, Tenn., and Wendover Field, Mass. He was flight surgeon in the Army Air Force and had been in England since May, 1943. He died July 4, 1944 from the result of an air plane crash on the Isle of Man, England.

Captain Cundiff was regarded as possessing great skill as a surgeon. He was intensely interested in his career and fellow physicians considered his future unusually bright. He was of quiet disposition and pleasing personality and everyone who knew him was his friend. His friendships were close, and warm, and lasting. He was a member of the First Christian Church and was regular in attendance, taking part in many church activities.

As a boy he was a member of Troop No. 1 Boy Scouts of America (now Troop 79), and took an active part for several years. He was a talented musician, playing the trumpet and saxophone and was a member of several amateur orchestras and of the Somerset School Band. One summer while attending college, he and several others organized an orchestra and made a tour of several countries of Europe. They left Poland the day before the Nazi marched in to occupy the country.



LIEUTENANT FRED H. GREENWELL
1919-1944

Lieut. Fred H. Greenwell, M. D., age 25, son of Dr. J. I. Greenwell and Mrs. Greenwell, New Haven, died of virus pneumonia Thursday, Aug. 10, at 7 p. m. at the Jacksonville, Fla., Naval Hospital, where he was stationed. He had been ill a week.

He received his early education at St. Catherine's Parochial School, New Haven. Following his graduation from the University of Louisville School of Medicine in November, 1942, Dr. Greenwell served a year internship at Sts. Mary & Elizabeth Hospital, Louisville. He was a member of the Phi Chi Fraternity, the Nelson County

Medical Society. He was commissioned a lieutenant junior grade in the United States Naval Reserve in June, 1943, and in November, 1943, reported to the Naval Hospital at Jacksonville for duty.

The following resolutions were adopted by the Nelson County Medical Society:

WHEREAS: The medical profession has by the untimely death on August 10, 1944, of Lieut. Fred Hugh Greenwell, New Haven, while serving in the Armed Forces of his Country, suffered a great loss, and

WHEREAS, the Nelson County Medical Society feeling this loss most deeply, not only because this young physician was the son of a member of our Society, Dr. J. I. Greenwell, and because at this trying hour when our Armed Forces are so much in need of the services of every available trained physician, but also because of his youth and his training which but for his death would have been available for the benefit of our civilian population at the termination of this war,

NOW, THEREFORE, BE IT RESOLVED that Nelson County Medical Society express its deepest sympathy to the bereaved family of the deceased in this sorrow and remind them that this loss is felt deeply not only by them, but by the members of this Society, the officers with whom he was serving, and the many friends with whom he had been associated.

It is ordered that a copy of these Resolutions be made a part of the permanent records of the Society, and that a copy be sent to the family of the deceased, a copy to the Journal, and a copy to the Kentucky Standard.

Henry S. Harned
E. T. McMahan



CAPTAIN WALTER O. MCCAMMON
1911-1943

Captain Walter O. McCammon was born in Indiana, April 3, 1911. His family moved to Lebanon, Kentucky shortly thereafter, and he always considered himself a native Kentuckian. He received his early education in Lebanon, B. A. degree from the University of Kentucky and was graduated from Tulane School of Medicine in 1936.

Captain McCammon began general practice in Springfield, in 1936, where he remained until January, 1942. At that time, he went on the Harvard Service as a resident in medicine at Boston General Hospital, leaving there to enter the Army Air Force in July, 1942. In May, 1943, he went overseas as Flight Surgeon, with rank of Captain, in the 29th Squadron of the 313th Troop Carrier Group.

This outfit was stationed in North Africa, later moving up into Sicily. It was in Sicily, on November 14, 1943, that he died. The cause of death given officially was "infarction myocardium." He was in excellent health and spirits and was hospitalized but a few hours before his death.

He is survived by his wife, Marcelle Leverich, Newcomb graduate, and a son, Peter.

CURRENT COMMENTS

The Lederle Laboratories are sponsoring a special series of weekly radio interviews under the program "The Doctors Talk It Over" which will be broadcast coast to coast over the Blue network each Friday afternoon beginning October 6th. Eminent members of the medical profession will report informally and informationally to the physicians of the nation on the latest developments in medical research and practice.

Such men as Dr. Elliott P. Joslin, Surgeon General Thomas Parran, and Dr. John Toomey, the latter having given such a splendid paper at our state meeting entitled "Chemotherapeutics in Pediatrics," and Major General Norman T. Kirk, and other eminent physicians of international repute in their respective fields.

The Lederle Laboratories have long been a contributor to the advertising columns of the Journal, and any comments on this program to this firm will be greatly appreciated.

At the annual meeting of the Association, the Scientific Exhibits were of unusual interest and equal to a postgraduate course in various fields.

Mr. Thomas Hull, Director of Scientific Exhibits of the American Medical Association, had an unusual exhibit which contained many pictures and demonstrations on Tropical Diseases and of special interest were the various mechanical devices to aid the hard of hearing, with a constant demonstrator in charge.

Dr. Cora Reeves, Berea, a returned missionary from China, created a great deal of interest with her exhibit on soybeans as an article of diet. She prepared samples daily of the various types of food that could be used from this bean; her soybean cheese was quite delightful as well as her soybean milk and meat substitute.

Dr. Gordon S. Buttorff, Louisville, had quite an extensive exhibit of X-ray pictures, models and charts showing the various phases of Arthritis, its etiology and treatment.

The Blood Donor Service of the American Red Cross showed preparation and administration of blood plasma, with a method of its intravenous administration, and many charts and models explaining its method of preparation.

Dr. A. M. Lyons, Frankfort, Director, Division of Hospital and Mental Hygiene, had a very splendid display of articles made by patients in the various hospitals. Many of them were of very beautiful design.

The laboratory of the State Department of Health had samples of containers and a fully equipped miniature Kahn laboratory; colored photographs of vectors of exotic diseases, and a world map showing their location. The Division of Industrial Hygiene exhibited their regular engineering and laboratory instruments used in their work in industrial hygiene.

The Annual Meeting of the Southern Chapter of the American College of Chest Physicians will be held jointly with the Southern Medical Association in St. Louis, November 13-16. The DeSoto Hotel will be the headquarters.

The first Scientific Session will be held at the St. Louis Municipal Auditorium Monday, November 13th at 2:00 P. M. That evening a cocktail party will be given at the DeSoto Hotel followed by a dinner in honor of the President, Paul H. Ringer; the guest speaker will be Herman E. Hilleboe, Washington, D. C.

The program will consist of speakers of national reputation such as Sydney Jacobs, New Orleans; William F. Rienhoff, Jr., Baltimore; Lieut. Colonel Brian B. Blades, Washington D. C.; Richard H. Overholt, Brookline; Walter Vest, Huntington; Jay Arthur Myers, Minneapolis; Charles M. Hendricks, El Paso; Major Walter L. Nalls, Washington; Minas Joannides, Chicago; George F. Ornstein, New York, and O. A. Sander, Milwaukee.

All physicians attending the Southern Medical Association are cordially invited to attend this meeting. For further information write Benjamin L. Brock, Louisville, secretary-treasurer.

The latest News letter issued by the Periodical Section, War Finance Division, U. S. Treasury Department, makes an earnest appeal to the American people to appraise realistically our present military and financial situation, in order that they may not confuse the hard, war facts with their hopes for peace. The war is not yet over and it is not yet all paid for. With the approach of the Sixth War Loan, it is important to bear in mind these three facts:

1. The European fighting will cost much money, long after the fighting stops.

2. The war against Japan is just entering the all-out stage.

3. Everything needed for prosecution of the war in the Pacific will cost more than we are paying for prosecution of the war in Europe.

It will, it is pointed out, cost almost as much to fight Japan alone as it has cost up to now to fight both Germany and Japan. In support of this statement, figures from the War Department are cited, showing the effects of the greater distances involved and the more costly types of equipment used. For example, it will take twice as many ships to move the same amount of freight, at an average increase in cost of 25 per cent. Again, long range bombers, B-29's, cost twice as much as do the largest bombers used in European areas. These bombers require twice as much high octane gasoline as do planes that are bombing Europe, and the

cost of getting the gasoline to them is much higher.

The success of the War Bond program to date has been due largely to person-to-person solicitation. The greatest sales organization in history, made up of 5,000,000 War Bond Workers throughout the country, did yoeman service in putting over the Fifth War Loan, in which sales to individuals were approximately $2,500,000,000 greater than the average of the previous four war loans. This same organization is confidently relied on to make the Sixth War Loan even more successful. Physicians throughout Kentucky are urged to join this volunteer organization and do their part in assuring that our fighting forces will not be hampered by the lack of equipment and supplies required to bring the speediest possible victory in both the European and the Pacific areas.

The Metropolitan Life Insurance Company has recently released a leaflet and posters on "Appendicitis" to convey to the lay public important information that should contribute to the prevention of this disease, or certainly to earlier action on the part of sufferers in seeking medical attention. The paragraphs in the leaflet carry the following headings: (1) What Appendicitis Is (2) When to Suspect Acute Appendicitis (3) Avoid Taking a Laxative or Enema, or Other Home Remedies (4) Call Your Physician Without Delay (5) Rest While Awaiting the Doctor (6) What to Remember (7) Recurrent Attacks of Appendicitis.

A letter from Doctor Donald B. Armstrong, Second Vice-President of the Metropolitan Life Insurance Company, to the Editor, expresses an earnest desire to have this leaflet made available through the profession for the most effective service possible. Doctors reading this Current Comment desiring copies of this leaflet and the accompanying illustrated posters should write Doctor Donald B. Armstrong, Welfare Division, Metropolitan Life Insurance Company, New York City.

Take interest I implore you in those sacred dwellings which one designates by the expressive term laboratories. Demand that they be multiplied, that they be adorned, these are the temples of well being and happiness. There it is that humanity grows greater, stronger and better. Science is the soul of prosperity of nations and the living source of all progress.

ORATION IN SURGERY

HAZARDS RELATED TO THYROID SURGERY

J. Farra Van Meter
Lexington

During the past quarter of a century the surgical treatment of thyroid disorders has made remarkable and gratifying progress. Within the memory of many of us, the operation for Graves Disease was known to carry a mortality as high as eighteen to twenty percent. Today that same procedure is attended by a mortality of less than two per cent and in the general run of thyroid cases surgically treated, by those competent to do this work, less than one per cent.

The reasons for this improvement are many. The early and accurate diagnosis of hyperthyroidism, the careful and adequate preoperative treatment, the skillful and judicious removal of the goitre itself and the close supervision immediately following operation, all have contributed substantially to this spectacular decline in surgical mortality.

In view of these facts, therefore, it follows naturally that operations upon the thyroid gland are becoming increasingly common. The patient is reassured regarding the safety of the undertaking. She usually knows one or more who have undergone such treatment and have come through safely. The improvement noted is usually apparent and quite gratifying.

As for the surgeon, his confidence has become sure and well established, so that he seldom hesitates to recommend such an undertaking where the condition indicates it. Nevertheless, there remain certain definite obstacles to successful thyroid surgery and the great increase in the number of cases operated upon as well as the number of men competent to do this work, only serve to emphasize these hazards.

The diagnosis and selection of cases for operation have their difficulties. It should be said that the average man in general practice is far more alert to the early manifestations of hyperthyroidism than was the case twenty years ago. He is fully aware that the individual who presents the picture of weight loss, rapid pulse, flushed face and neck, moderate or pronounced exophthalmos, fine tremor, ab-

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normal appetite, excessive energy and nervousness, with or without definite enlargement of the gland, is, in all probability, thyrotoxic. True it is that the vast majority show some definite enlargement though occasionally a very toxic gland may be of normal size but extremely hyperplastic. No, it is not this type of disorder that is usually a diagnostic problem, nor is it the individual presenting a large, nodular, adenomatous gland usually displacing the trachea well to one side or the other and giving other symptoms of mechanical pressure, with or without toxicity. The senior medical student is quite capable of correct diagnosis here and knows what the accepted procedure is. But the patient most apt to test one's diagnostic skill and the keenness of his observation is the so-called borderline thyroid.

This is usually a female in her twenties or thirties, inclined to be somewhat under weight, with only a fairly good appetite and the blood pressure will likely be below normal. Frequently her chief complaint will be nervousness, fatigue and choking. Beware of thyroid surgery on the individual whose chief complaint is choking and who presents no pronounced enlargement of the thyroid gland. The neurotic patient without an enlarged thyroid is more likely to complain of choking than is the toxic patient with a definitely enlarged gland.

This type of individual calls for very exhaustive study before surgery is decided upon. This should include complete blood and urine examinations, basal metabolism on two or more successive days, chest x-ray, careful pelvic examination and, probably most of all, a complete picture of her domestic and economic situations which may well be the chief causative factors for nervousness and unhappiness. Rest assured, that in these cases a competent psychiatrist will usually do far more for the patient than the surgeon. Furthermore, the danger lies not simply in having improperly subjected the patient to the discomforts and expense of major surgery but more seriously having disturbed and possibly permanently upset the normal body mechanisms so vitally influenced by the thyroid gland. Vast experience has shown that the basal metabolic rate is only one item of diagnostic significance and seldom should it be the sole deciding factor in these borderline cases. Certain it is that a slight elevation above the normal basal metabolism rate does not constitute sufficient evidence to warrant operation. On the contrary, it usually calls for the more conservative measures as often prescribed by the neuropsychiatrist. In this connection one other factor is important. The so-called war anxieties today give rise to a wide assortment of symptoms, some of which may simulate early hyperthyroidism. I need not tell you that surgery is not the intelligent solution of such a problem.

Another, though less difficult problem in thyroid surgery regards the small, nodular, non-toxic goitre. It seems that the average man in general practice is inclined to regard this as an entirely innocent process which should be ignored until it causes trouble, meaning evidences of toxicity. Here, as a matter of fact, the question of toxicity is quite secondary to that of malignancy. Crile clearly demonstrated years ago that eight to twelve per cent of nodular goitres become malignant after the age of forty-five. Thus it would seem that the same rule applies to the small nodular goitre as applies to the apparently innocent lump in the breast, its removal and microscopic identification are clearly indicated. Furthermore, the pre-operative diagnosis of malignant goitre is seldom made. Dinsmore reports less than six per cent so diagnosed at the Cleveland Clinic. Hence if one waits for positive proof before operation it may well become a fatal delay.

In view of these facts, therefore, what seems an innocent and harmless process in the form of a small nodular goitre should be considered a potential source of real trouble and its early removal a very wise procedure.

The pre-operative care of these patients has long since become a very vital factor in their safe conduct. The proper administration of iodine and its profound influence upon the over-active thyroid are now items of common knowledge. At the same time one must bear in mind that a certain percentage, probably not over ten to twelve, of the toxic adenomata will show little response to preoperative iodinization, while the diffuse toxic gland is nothing short of spectacular in its response. Adequate fluids, parenterally as well as orally, a high caloric diet, proper sedation by one of the barbiturates, complete rest and quiet, constitute the measures, which, for the most part, will bring about the most gratifying improvement. Failure to follow these simple but well established procedures means, first, a

longer, and more tedious period of preoperative care, and, second, a much more hazardous surgical undertaking because of persistent thyrotoxicosis. For the most part, the pulse rate is a very dependable barometer as to the time when operation may be done with reasonable safety. Some lay great stress on repeated metabolic rates and operate only when a markedly elevated rate has declined sharply. Many with wide experience, however, rely chiefly upon the pulse rate and have found operation on the toxic patient a comparatively safe procedure when the pulse rate has been in the eighties or lower nineties for two or three days. In all the realm of medicine few results are more spectacular than the improvement shown by the patient with diffuse toxic goitre when placed upon the treatment as outlined above.

Ten years ago the very toxic patient was not infrequently subjected to the so-called minor procedure of superior pole ligation. Experience has shown, however, that where more adequate time is taken before operation, pole ligation may be avoided. By the same token, also, the subtotal resection of the gland may be made safe and wise where previously only a lobectomy was deemed advisable, thus making a second operation necessary eight to twelve weeks later.

The administration of digitalis to these cases should seldom be resorted to and only in carefully selected cases where cardiac decompensation is pronounced. It has been clearly shown that in the vast majority of cases iodine alone will bring about gratifying improvement in the heart action.

Technical hazards to the operation itself, while many, are nothing like so great as they were some years ago. Severe hemorrhage, recurrent nerve injury, and the removal of the proper amount of tissue for any given case constitute the chief difficulties at operation. Good surgery, under any conditions, calls for proper and adequate exposure. One surgeon of wide experience has observed that the cause of most poor surgery is lack of proper exposure. Certainly this is eminently true as regards the thyroid. In many cases where the enlargement of the gland is only moderate, careful dissection of the ribbon muscles from the gland, well up, above and below, will give the operator a clear view of his field and the vital structures involved. Where the gland is more bulky and nodular, however, nothing expidites the ease and safety of the operation so much as transverse division of the ribbon muscles, between clamps, on one or both sides. This serves to open, like a book, the field of operation and greatly minimizes risks from hemorrhage and vital nerve injury. The careful placing of hemostats is of utmost importance, not only for safe and proper control of hemorrhage but to avoid nerve injury. The carefully placed hemostat to the vessel before cutting will save time and frequently avoid trauma. Double ligation of the superior and inferior poles is a wise measure of safety. It is somewhat spectacular but usually poor surgical technique to employ mass ligation of four or five hemostats with one ligature; such a procedure not infrequently leads to troublesome or even severe post operative bleeding.

The diffuse, toxic gland is much more inclined to give troublesome bleeding than is the nodular adenoma. Its greatly increased vascularity and friability make the control of hemorrhage far more tedious and hazardous. On the other hand, the adenoma may frequently be "shelled out" with ease, safety and minimum bleeding.

Possibly no complication in thyroid surgery, short of lethal exodus, is more distressing than local cord paralysis resulting from injury to the recurrent laryngeal nerve. The writer has had occasion to review over thirty-seven hundred thyroid operations from which interesting data is made available. Thorough familiarity with the usual location and relational anatomy of these nerves is imperative, remembering always the possibility of some abnormal relationship which might give rise to irreparable damage. A nerve may be lifted from its normal position by a large nodular adenoma, or it may lie away from the tracheo-esophageal groove, which is its normal position. It should be remembered that the left and right inferior nerves vary greatly in their point of origin. The right arises in front of the subclavian artery while the left arises from the vagus as it passes over the arch just lateral to the ligamentum arteriosum. The distribution of the branches are essentially the same on left and right. The superior nerve arises from the ganglion nodosum and divides into the external and internal nerves at the lower portion of the thyroid cartilage.

For the most part nerve injury occurs by either grasping with a hemostat and ligation or by tugging on the gland in process of its resection. Change in voice,

the development of stridor and increasing difficulty in breathing are the presenting symptoms. Having the patient under local anesthetic is of great assistance where this complication arises, for then the voice changes are noted early and may afford the operator an opportunity to note the point of damage and possibly make amends by removing hemostat or ligature.

The voice changes which follow unilateral injury depend upon the position of the cord, or, in other words, whether abductor or adductor fibers have been injured. If the cord is in the midline, the voice will likely be rather high-pitched and the patient will experience some difficulty in breathing. If, however the cord is in adductor paralysis and away from the midline, the breathing will be easy and the voice a lower pitch. The vast majority of unilateral nerve injuries develop a normal voice in one to six weeks, due to the compensation of the opposite cord. Accurate data regarding the condition of the cords calls for routine pre and postoperative vocal cord examination. Reliance upon the condition and sound of the voice is not sufficient, since it has been shown that thirty per cent of unilateral cord injuries occurring before operation give no apparent signs or symptoms.

The most distressing cases are those of bilateral cord paralysis. Here the chief complications are interference with breathing, loss of voice and great difficulty in swallowing. The type of paralysis is of utmost importance. If the cords are in the midline, thus reducing the lumen of the trachea to a mere slit, the stridor will be marked and tracheotomy very likely necessary to preserve life. On the other hand, if the cords are in the so-called cadaveric position, partially away from the midline, there is frequently a sufficient opening to allow adequate exchange and thus one is able to avoid tracheotomy. Where there is bilateral adductor paralysis the cords are widely separated, air passage is adequate, the voice is almost completely absent but tracheotomy is usually not necessary. A study of these cases show that twenty-four per cent of bilateral vocal cord paralysis require tracheotomy and less than five per cent recover the normal voice.

By way of emphasis, then, we repeat, good exposure, combined with thorough knowledge of the relational anatomy will save countless headaches and heartaches in thyroid surgery.

The amount of gland to be removed at operation is of real importance. Not only does it relate definitely to the question of myxodema but more vitally, in the acutely toxic case, to recurrence. Here, as elsewhere, experience is invaluable.

In cases of pronounced Graves Disease, one is far more likely to leave too much gland than he is to remove too much. Many feel that it is highly desirable to produce a mild myxodema in such cases by taking out sufficient gland to bring this about. In any event, four to six per cent of the toxic diffuse goitres show evidence of recurrence within six months of the operation even by men of wide experience. The most logical conclusion is that too much tissue was left at the time of operation. Here, again, proper exposure, allowing the operator to fully estimate the extent of the enlargement will go far in avoiding this distressing and disturbing complication. Then there is that very tedious and difficult case where an almost total extirpation of the gland was done. Because of severe toxicity and in spite of such measures evidences of recurrence develop. Where no evidence of recurrent growth of the gland can be found by palpation, deep x-ray therapy should be considered. However, where definite nodular recurrence is found, its surgical removal is clearly indicated. In this connection one must remember that a very small amount of hyperplastic tissue may readily give rise to severely toxic symptoms. On the other hand, the operation for recurrent goitre is far from tedious and hazardous as regards vocal cord injuries. The normal land marks are distorted and the likelihood of recurrent nerve injury is many times greater than in the primary operation.

The postoperative care of the severely toxic case is extremely important. Adequate fluids in the vein or under the skin, combined sufficient sedation by morphine, blood transfusions and intelligent nursing care; all contribute greatly to the safety of these cases and every effort made to avoid nervous irritations and stimulation. As soon as tolerated, nourishing liquids are given orally.

Undoubtedly much remains to be learned regarding the physiology and pathology of this vital structure known as the thyroid gland. It is not unreasonable to believe that the time may come when some method of approach other than surgical will be proper treatment for these disorders.

Noteworthy in this connection are the

works of Astwood, the MacKenzies, McCollum, and others with the chemical compound known as Thiouracil. Its administration has, in many cases, brought about a relief of symptoms along with a greatly lowered metabolic rate. Whether or not this drug will prove a satisfactory substitute for surgical treatment of toxic goitre cannot be stated as yet because of limited experience.

Until such a time, then, careful attention to the hazards as noted above, will go far in making the surgical management of these problems a safe and gratifying course to follow.

THE MEDICAL DIRECTION OF HUMAN DRIVES IN WAR AND PEACE

Major General David N. W. Grant
The Air Surgeon
Washington, D. C.

The greatest challenge which faces the medical profession today, in my opinion, is the physical and the psychological rehabilitation of the returning war veteran as a member of his community.

Three years ago the medical profession was called upon to mobilize its ranks for service in the armed forces. We did so. How well we met that challenge is being demonstrated in the high quality of medical service we are delivering every day on every front. This was a second challenge, the performance of our mission as doctors at war, and we shall continue to accept it and concentrate our energies on war medicine until the last wound is healed.

In the Army Air Forces, however, we have accepted rehabilitation, psychological as well as physical, as a function of war medicine. Our Convalescent Training Program has proved that this task should begin as soon as the soldier is hospitalized and should continue without interruption until he is able, and knows he is able, to resume a useful life as a soldier or a civilian. Our success in this direction, which places the primary responsibility for rehabilitation within the military organization, has demonstrated that the over-all problem of human reconversion, the task of converting soldiers back to citizens, is not waiting an end of war. They are returning in thousands from the beachheads of Salerno, Anzio, Tarawa, Normandy, and Saipan and from the airdromes of England, Italy, Burma, and the Pacific. For many of these sick and wounded, the war is already over. This current situation may be regarded as a pilot run on the immense rehabilitation project to come when millions of war veterans are restored to civilian environment.

By this I do not mean that millions will be disabled. The physically handicapped will be numerous, too numerous, of course. The job of physical restoration and mental readjustment of the physically disabled is clear cut. It is being tackled in an organized and effective manner by the Army, the Navy, the Veterans Administration, the American Medical Association, and the many civilian and government agencies associated in the Baruch Committee on Physical Medicine.

My point is that, in comparison to those with outright disabilities, a far greater proportion of our returning war veterans will be able-bodied but psychologically different from the civilians who left their communities to enter military service two, three, or four years before. They have different attitudes, different feelings, different emotions, different drives, and they present a problem of rehabilitation which is complicated and obscure. The nature of their problem is difficult to understand and complex in its solution. While these differences in behavior fall within the field of psychiatry, they do not apply merely to the neuropsychiatric casualty, the case of frank war neurosis, or operational fatigue, as it is known in the AAF. More specifically, I am speaking of the war veteran who would be classed as normal by any ordinary physical or mental standard, but whose drives have been altered by the impact of war.

From the time he was inducted, this man's foremost desire has been to get home again. He carries it through the rigors of training and the terrors of battle. He is nonetheless loyal and he fights nonetheless well because of his human yearning to go home. But when he does, when he is again among his relatives and friends in his home town, he may be engulfed with the feeling that everything is changed, that he somehow has been cheated. He feels disappointed, disillusioned, depressed, and dissatisfied. He may be tense and restless, and even wish he was back in combat. His lost feeling may express itself in a feeling of resent-

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ment and hostility toward the people and the community he loves. He may come to feel more like a victim of these people than their hero.

What has happened to this man is not hard to understand. He has received some public attention, but the story needs to be made a part of a national educational campaign. Such a program must start with the elimination of the widespread misunderstanding which exists in the mind of some physicians as well as the general public as to the significance of terms like "psychoneurosis" and "neuropsychiatric casualty" and as to the nature of military psychiatry. In the first place, for most of us physicians, the methods of psychiatry seem mysterious, esoteric, and incomprehensible. Where other medical specialists may see and palpate the hernia by physical examination, find a kidney stone or an ulcer by reading an X-ray, or identify typhoid fever by a bacteriological test, the psychiatrist can diagnose a functional disturbance of the central nervous system only by a qualitative analysis of changes in the patient's behavior and personality. While to most of us this interpretation of illness from actions and reactions seems an intangible way of making a medical diagnosis, you will see, if you think about it, that it is a social practice in which we indulge every day. Constantly, we are judging each other by the deviations of the subject's conduct from the conventional. We reach glib conclusions that Joe is " a crazy guy" or Jack "acts funny." But we accept them, and maybe even admire them. We excuse the man who has a spell of being crabby, jittery, seclusive, bellicose, or eccentric as being somehow different than usual and let it go at that. But if Joe or Jack goes to a psychiatrist we may change our minds, because psychiatrists are commonly identified with the treatment of the mentally disordered and unbalanced, and we think that anyone who needs a psychiatrist must be pretty bad off. All of us, of course, have an instinctive distrust and aversion for the insane. Actually, the psychiatrist probably agrees with us that Joe or Jack "acts funny" but he calls it a psychoneurosis, or functional nervous disorder, which to him doesn't even imply a psychosis, or insanity. But the damage is done because the person is in the hands of a psychiatrist, and Joe or Jack is tagged with the name which the American public has come to think of in terms of weakness.

This impression results in the wide misunderstanding of the fact that soldiers who have been labelled as "NP" are no different than other people who get the jitters or become upset in difficult and harassing situations. By any working standard, these men were accepted as normal in their communities, which is the environment to which they usually are best adapted. Even those who were rejected for military service at the outset on neuropsychiatric grounds tend to fall within normal standards as far as their civilian environment was concerned. In it, they were capable of making good social and occupational adjustments, but in a military environment of discipline, regimentation, insecurity, and hardship, they did not look like good fits. Outside of the comparatively small group of soldiers who were psychoneurotic or less frequently psychotic but were able to get by the induction examination, the war psychiatrist is dealing with a normal person in an abnormal environment.

This is the message that the physician, the relatives, the friends, the employer, and the community of the war veteran should hear. Whether he is labelled a neuropsychiatric casualty or is discharged for some other reason, or is merely home on leave, any differences in his behavior probably comprise a hangover from his normal reactions to an abnormal way of living, and dying.

What war has done is call upon this individual to accept the abnormal idea that self-preservation is less important than self-sacrifice, that there is a distinction between killing a man in peacetime and killing him in war. Conditioned throughout his formative years to seek security and comfort, to love peace and freedom, the raw recruit is quickly and brutally exposed to a system which, first in training and then in combat, subordinates his personal security to that of the group, continually replaces comfort with hardship and strain, offers him peace only as the distant reward for making war, and denies that freedom is preferable to authoritarian discipline and regulation.

It is difficult for the individual to adapt himself to this military deflation of his ego, to this superimposition of the group ego on, and frequently against, his will. All men are alike in that they have feelings, and in that these feelings may run into emotional conflict with other feelings

which are equally acceptable. In our flyers, we have observed a number of basic conflicts. The most obvious is that of the fear of destruction conflicting with the compulsion to fight. The individual's instinct says flee, but the will of the group says fight. There is the very real conflict between one's sense of duty, or patriotism, and his worries over his wife and his child. There is the conflict in the desire to stick by your friends in the squadron when your ego tells you to "save yourself." And there are conflicts arising from a feeling that your friend in the ball turret or in the wing position was killed because of some personal failing on your part. One of the most interesting conflicts observed in our flyers has nothing to do with the man's peacetime conditioning, but with his complete acceptance of flight as a normal environment. He loves to fly. He is the "natural," and you will hear him say, "Doc, I'd rather fly than eat." He means it. The airplane gives him a lift spiritually as well as aerodynamically. To get up there in the sky and look down on earth inspires in him a sense of majestic freedom, a kinship with the gods. The conflict arises from his discovery that, as the result of combat flying, the thing he loves seems bent on destroying him.

Can these soldiers who have faced tensions and stresses far beyond any peacetime demand upon their organism be regarded as mentally suspect because they carry the anxieties they have developed in combat back home with them? You know the answer is no. They have reacted normally to an essentially inhuman environment, and, in most cases, have made remarkably good adjustments to their military environment up to a point where no man could be expected to endure much more. They are not failures because they may have developed certain symptoms of anxiety. Each man has his individual tolerance point for military stress. The basic soldier, uprooted from the local environment and transplanted in the training camp, may not be able to make the adjustment. The flyer, who has made every adjustment from the original load imposed upon him in the aviation cadet center throughout the two years it takes him to complete his flight training, in a few instances may not be able to make the final adjustment to combat flying.

But the great majority of them do, and they fly their missions, 25, 50, or more, carrying their anxieties into battle and out again. They are the strong and the successful. But when they have completed their tour of duty and returned to the United States, they bring their differences in behavior with them.

These men have been poured into a mold, the mold of war, and to remove them from it requires adjustments as profound as those they were forced to make when they changed from civilian to military environment. They present all degrees of difficulty in adjusting to the peaceful, prosaic, and trivial circumstances of home life after learning to live in a fighting group which so orders their life that it can give all or take all with one word from one commander. One man, flexible, resilient, may come home, take his wife on a fishing trip and settle down to being "good old Bill" again without so much as a harsh word. Things are different, but he can "sweat" anything out. Another highstrung race horse of a man perhaps finds that the releases he found in combat are boiling over in hostility toward his mother's solicitation, or in a desire to punch the nose of every civilian he sees on the street.

There will be every gradation in the changes which war has wrought in the behavior of these men, because of the differences in their drives, their conditioning, their physiology, and their attitudes. Any man forced to conform to an environment in which he does not fit well develops nervous tension and therefore psychoneurotic symptoms. The greater the discrepancy between the structure of his personality and the structure of the environmental stresses, the greater the tension and the more severe his symptoms. The longer the stresses are continued, the more worn out he becomes from the tension.

The individual's personality can be described as having the characteristics of the curved leaf in a spring, such as found in an automobile. If the spring is forced to conform to a curve either greater or less in its radius than that to which it was molded, the spring is under tension. The greater the discrepancy from the natural curve, the greater the tension, and the more the steel is fatigued.

Like the various leafs in the spring, each individual has his own curve, and will have to be bent in varying amounts to fit in the curve of tension imposed by combat. If the tension has been sufficient

to fatigue his personality, he may be slow to spring back to the shape in which his original environment molded him.

This is the challenge we face each time a war veteran returns home, to see that he has full opportunity to spring back to his original personality curve. Given a little time and a little help, most of them will. The original curve of that spring is strong, and removal of abnormal stress and tension is curative in most cases. But the changes from an environment of tension to one of relaxation is a radical one and, in instances where the fatigue of the personality has been great, special help must be given in making the adjustment.

What we are dealing with is the problem of fitting individuals into groups, individuals who express themselves in some sort of work, groups designed to produce in some fairly specific manner. Perhaps at first glance this does not seem like a medical problem. That has not been the experience in the Army Air Forces. The AAF Medical Service has found a direct relationship between a man's health and the group to which he is assigned. If he is not doing the right job, or the group is not doing its job, he tends to become unhappy and inefficient, and these characteristics may be manifested in various breakdowns in his health. If after breaking down he is not reoriented as a member of a productive group his recovery is slow and perhaps incomplete.

In dealing with the highly specialized occupation of combat flying, we have developed a program in aviation medicine which I feel introduces a new concept in medical practice or at least brings previously unrelated branches of science into a medical focus.

Our first interest in the flyer is the matter of selection. Each man must have the physical capacity and the psychological aptitude to fly. The physical examination for flying performed by the Flight Surgeon emphasizes not only general mental and physical fitness but also normal function in vision, hearing, equilibrium, and personality. A part of the examination is devoted to a psychiatric interview which explores the history of the candidate with emphasis on family relations, environment, morphology, intelligence, achievement, psychomotor activity, and emotional stability.

The psychological testing of flying aptitude begins with a three-hour, pencil-and-paper test known as the Aviation Cadet Qualifying Examination. This examination involves 150 multiple choice questions which have been sifted from 2,600 items to provide a measure of native alertness, understanding of mechanical principles, interest in aviation, and aptitude for learning to fly. The selection continues with a battery of 20 psychological tests developed by aviation psychologists to provide a reliable prediction of the individual's chances for success in flying and to classify his special aptitudes as pilot, navigator, bombardier, radio gunner, engineer gunner, or career gunner. These tests, each designed from the requirements for a specific flight operation, consist of 14 pencil-and-paper tests given during the course of one day and six apparatus tests taking another half day. Paper tests include such subjects as reading dials and tables, understanding of mechanical instruments and principles, and spatial orientation in relation to maps. The apparatus tests, to a large extent developed at the AAF School of Aviation Medicine, measure such factors as finger dexterity, ability to divide attention between two different hand operations, speed of mind-and-muscle reaction to light signals, coordination of eyes, hands, and feet in complex mechanical operations, and coordination of psychomotor movements with the sense of equilibrium.

The physical and psychological selection is so exacting that fewer than 20 in every 100 original candidates qualify for flying training. But what we have left is a group which, in a statistical comparison of the above-average and below-average scorers in the psychological test battery for pilot, has three times the chance of passing primary training, three times as much chance of avoiding aircraft accidents in primary training, three times as much chance of passing multi-engine transitional training, and three times as much chance of hitting the target in fixed gunnery. Also, we have found that the above-average scorer has a better chance of surviving in combat.

Our aviation psychologists have developed the most comprehensive mass psychological testing program in history, all for the purpose of fitting the individual into the occupational group where he has the greatest chance of succeeding. This wartime demonstration indicates that an entire industry or even an entire nation

could make progress by determining an individual's aptitudes, personality, and interests and then training him for the task for which he is best fitted.

Our interest follows the flyer into training and combat. We call it "care of the flyer." A Flight Surgeon is assigned to each tactical unit from the Squadron on up to the Air Force. Here, in the tactical organization, we have a military formalization of the group of which I have been speaking generically. An AAF Group consists of two to four Squadrons of a particular type, fighter, heavy bombardment, medium bombardment, etc., plus a headquarters staff. Typically the Group is the complement of a large airbase and usually is the largest tactical unit in which the individual feels close identification with his fellows, since they are interested in the same type of airplane and inhabit the same community. The Flight Surgeon occupies a position in this group which, I think, is rather unique in medicine although it has some precedent both in the role of the old country doctor who was a power in his community, and in the functions of an industrial surgeon. Fundamentally, the Flight Surgeon's participation is that of a medical officer providing professional services to military personnel who fly or who make up the system supporting the flyer. The inseparable relationship of the flyer and his airplane requires, however, that the Flight Surgeon extend his knowledge to the technology of flying. In this way he differs from the general practitioner, who ordinarily is not concerned with the patient's occupation, and assumes a resemblance to the industrial surgeon. The Flight Surgeon is vitally interested in the tools of the flying trade and the atmospheric environment in which they are used. The flyer going to high altitude requires a number of protective devices without which his health and efficiency would be destroyed, if he survived at all. These devices include oxygen masks and electrically heated clothing, parachutes and life preserver vests, sun and dark adapter goggles, first aid kits and emergency rescue kits, body armor and food warmers. In the development and application of all this occupational equipment, the Flight Surgeon must team with the engineer in the mutual adaptation of man and machine.

His interests extend still further, however, because he must also team with the tactician in the relation of the human organism to combat. Here he must combine the talents of the country doctor and the industrial surgeon with those of the clinical psychiatrist. His problem is the prevention of operational fatigue, the occupational disease of the flyer. It is an illness to which all flyers are susceptible, because each man has his flying efficiency curve and even the best may reach a point in that curve where he will break down himself or crack up his airplane. The syndrome of operational fatigue, made up of a composite of emotional and fatigue symptoms, is a product of chronic tension and physical tiredness manifesting itself in a state of anxiety. It is a destroyer of individual efficiency and laterally group morale. If he has the confidence of the men in the group, to whom he is a friend, and of the commanding officer, to whom he is an advisor, the Flight Surgeon can prevent operational fatigue where military conditions permit. Adequate rest, good food, proper housing, athletics, and entertainment are all preventive. But any contribution to morale aids in the prevention of operational fatigue, and nothing contributes more to morale than good leadership. The fitness of the individual for his job depends on physical capacity and psychological aptitude, but the fitness of a group of fit individuals depends more than anything else upon the intelligence manifested by the leadership in directing the group toward the logical utilization of its abilities. It has been one of the most profound observations of the war, I think, that not only the efficiency but also the health of a group is affected by the quality of leadership. Medical officers have observed both in the Air Corps and the Infantry that weak leadership is reflected in a high neuropsychiatric casualty rate and strong leadership in a low rate. The parallel between reduced efficiency and reduced fitness has been observed in the bombing accuracy and aborted missions of a group which had a high incidence of anxiety neuroses. Replacement of the Commanding Officer and the Flight Surgeon increased the group's efficiency and reduced its anxiety cases.

Thus you see the physician may become a key figure in unifying the group and preserving its fitness for productive work. Treating the sick individual is secondary to the function of treating the healthy group so that its members will not become sick. Here we find an unusual type of group medicine in which, instead of the

patient presenting his problem to a group of physicians, the physician participates in the problems of a group of patients.

Our final interest in the flyer is the restoration of his physical capacity and psychological aptitude for productive work after he has become sick. This is the function of the AAF Convalescent Training Program. We operate five convalescent hospitals where the flyer returning from combat with a physical disability or with operational fatigue may be given the special attention needed for his rehabilitation. The first objective is to salvage him for further military service for he, after all, is the man who was a success and not a failure in his military occupation. If it is not possible to rehabilitate him for resumption of flying duty, an attempt is made to retrain him for ground duty. Only as a last resort, is he discharged back to civilian life. If this is necessary, every effort is made to prepare him for this change of environment.

Convalescent training is fourfold in its approach. It aims at physical reconditioning, psychiatric restoration, vocational reorientation, and resocialization. If it's a job the man is worrying about, we help him find a job to his liking. If he has a family problem, we try to work it out with his wife. In fact, because of the husband-wife problems rising out of changes in the patient's behavior, we have established orientation courses for wives of returning war veterans.

As an example of what can be done if the group makes an effort to rehabilitate its own members, I'd like to cite the results obtained at one of our convalescent hospitals in a series of cases of severe operational fatigue. By severe, I mean that these individuals returned from successful completion of their combat tours with such symptoms as restlessness, tension, tremor, over-activity of the sympathetic nervous system, psychosomatic disturbances, anxiety states, phobias, depression, guilt reactions, inability to concentrate, mental confusion, weight loss, insomnia, battle dreams, irritability, startle reactions, loss of appetite or aggressive impulses. All were in need of psychiatric treatment, in addition to rest, physical reconditioning, and general reorientation. The results among officer flying personnel was restoration of 61 percent to full flying duty, 8 per cent to limited flying duty, and 27 percent to ground duty. This made a total of 96 percent rehabilitated in military service, with four percent being retired to civilian life. Due to less incentive, the full flying duty restorations among the enlisted flying personnel was much lower: 28 percent. An additional 6 percent were restored to limited flying duty and 48 percent sent back to ground duty, making a total of 82 percent rehabilitated in military service. Eighteen percent were discharged from the Army.

In considering these results, it should be noted that in a psychiatric case the individual's desires are an important factor in deciding whether he should fly again or not. The fact that two-thirds of the flying officers and one-third of the enlisted men who had suffered severely from the stresses of their combat environment are willing to go back is significant of the potentialities of a medical approach based on their relation of the individual's capacities and aptitudes to the occupational group. After all, these men had made their sacrifice, and it might be expected that none of them would care to return to an environment which had caused them distress. I believe a great many of our flyers once the end of the war has relieved them from the abnormal tensions of combat will realize that they are completely conditioned to a flying environment. They will then be normal men in normal environments.

As for the rest, we have directed the drives of these war veterans into winning a war, and now we face the responsibility of redirecting their energies into peace. You may feel that this war veteran is somebody else's problem, the psychiatrist, the psychologist, the sociologist. He is, indeed, their problem, but he is everybody's problem, the problem of his government, his community, his employer, his relatives, his friends, and his doctor. No one should be better qualified by reason of scientific training and humanitarian interest than the physician to give direction to a national program which will redirect the drives of these men into socially constructive, individually satisfying channels.

The medical profession, I am convinced, has a profound opportunity stemming from the task of reorienting these men in their group. This is the development of a new type of preventive medicine seeking to improve the individual's health and efficiency by his orientation in an intelligently directed group in which he has the aptitude and desire to work. In this field, which we may for the moment call industrial community medicine, lies the

challenge of transplanting to the soil of civilian industry some of the constructive discoveries we have made in the prosecution of a technological war.

CONTINUOUS CAUDAL ANALGESIA IN OBSTETRICS

A Review of the Literature

JAMES FRAZIER
Hyden

Briefly stated, the best obstetric analgesic is the one which gives the most relief of pain during labor, and has the least harmful effect on both mother and baby. At the present time, many feel that this is accomplished by continuous caudal analgesia. Since pain relief was introduced as a part of routine obstetric care, there have been many various methods and drugs used for this purpose, with varying success following the different methods. Some of the more widely used methods and drugs are morphine, "twilight sleep," barbiturates, and the present commonly used hospital method of nitrous-oxide oxygen inhalation in the later stages of labor. All of these methods have a certain amount of depressant effect on the baby. It was with this situation in mind that Hingson and Edwards, U. S. P. H. Service, developed a new method of obstetric analgesia, that seems to be a step nearer the solution of the perfect analgesic procedure in obstetrics. They had noted Lemmon's continuous spinal anesthesia reports in which he told of his development of a method of maintaining spinal anesthesia for surgery, by continuous, or fractional dose anesthesia. Instead of giving one dose of spinal anesthetic agent by one injection, as was done universally before that time, Lemmon devised a method to maintain anesthesia by continuous introduction of the anesthetic agent into the spinal canal, at frequent intervals, so that anesthesia could be carried for several hours or more as desired. The method entailed placing the spinal needle as usual, and leaving it in place, with the patient lying on a specially-built mattress which had a hole into which the needle recessed. Fluid was introduced through tubing connected with the needle, and coming from a jar containing the anesthetic agent. Hingson and Edwards sought to combine this idea with the previously used single caudal anesthesia injection of other men who had reported their results from time to time. In 1913, Schlimpert in Germany reported using a dose of caudal anesthetic for obstetric delivery work, and from 1923 through 1939 various American physicians reported the same method of anesthesia for deliveries. All of these men used a single dose, which lasted from thirty to 90 minutes only. Hingson and Edwards combined these two methods, producing the continuous caudal analgesia which was so widely publicized in 1943, in various magazine and newspaper feature stories, as "painless childbirth." Hingson and Edwards had used the method in early 1942 in 33 obstetric deliveries, 6 multipara and 27 primipara, with complete relief of pain in all cases within five minutes after the anesthetic had been given, and episiotomy and forceps delivery and repair were done in 23 of these cases without any other anesthetic having been given. All mothers and babies were in excellent condition. By January 1943, when they presented their first report in the Journal of the American Medical Association, they had used the method in 600 cases. Their method of administration was, essentially, to insert a 19 gage malleable needle into the caudal canal, inject 8 cc. of 1.5% metycaine, wait 10 minutes for any untoward effects, and then inject an additional 22 cc. of the solution. The injection was repeated every 30 to 40 minutes using 20 cc solution.

A word about the anatomy and physiology of the lower portion of the spinal column is here given to help in the understanding of the method to be described in detail later. The spinal cord normally ends at the level of the first lumbar vertebra, with the dural sac containing spinal fluid and the cauda equina tapering to a point in the sacral canal at the level of the second sacral vertebra. The sacral canal is continuous with the epidural space in the vertebral canal, the lower opening of this canal being the sacral hiatus. The needle is introduced through the sacral opening, is directed upward, the anesthetic fluid being introduced into the canal below the lower end of the spinal canal and cord. The fluid introduced bathes the sympathetic nerve roots coming from the sympathetic ganglia in the area, blocking the pain-bearing nerves, but not the motor nerves, so that the patient feels no pain, but can move the legs.

As soon as the patient complains of real distress from labor pains, and if there are

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no contraindications, i.e., placenta previa, disproportion of fetus to pelvis, uncontrollable hysteria, uterine inertia, abnormality of spine, history of sensitivity to anesthetic agent or local infection at injection site, the anesthetic is started. The skin over the sacral area is cleansed with soap and water and an antiseptic, and a small skin wheal is made with a hypo needle and 1.5% metycaine in saline, the patient being kept in modified left lateral Sims position. Deeper infiltration is done next, and finally a special malleable 19 gage needle is introduced into the caudal opening and advanced into the canal for one or two inches. Aspiration is done to determine if spinal fluid can be drawn into the syringe, or if blood is withdrawn. If neither of these are present, 8 cc of the solution are injected into the canal and the patient is watched carefully for ten minutes to make certain as to whether or not the needle is in the spinal canal. If no symptoms occur. 22 cc of the solution are then added to the amount of spinal anesthetic injected. The patient is kept on her side, and watched further for the effects of the anesthetic. Normally the patient feels a fulness of her legs, with analgesia in five to fifteen minutes, and cessation of pain from uterine contractions, which continue. A vasodilation of feet frequently occurs, the feet becoming hot for a short while. In 30 to 40 minutes 20 cc of the solution are again introduced through the indwelling needle, and analgesia maintained continuously, the minimum time being 35 minutes, the maximum 30 hours, the average about 7 hours. Delivery procedures such as forceps application, episiotomy and repair can be done without any other form of anesthetic being used, and other procedures, such as cesarian section, breech delivery and twin delivery are well carried out under this form of analgesia.

During 1943 other articles were published in the Journal of the American Medical Association and the American Journal of Obstetrics and Gynecology on the subject of continuous caudal analgesia. I shall briefly summarize the material presented in these articles, including a more elaborate article by Hingson and Edwards, in which they presented the results of the method in more than 10,000 deliveries, giving complications, indications and contraindications to the method.

Hesseltine and Gready of Chicago Lying-In Hospital gave a brief report of their use of the method in 20 patients stressing its advantages and disadvantages. Their results were 14 excellent, 3 fairly good and 3 failures. They noted that the analgesia extended to a higher level and one side of the body in some patients, some had headache and one toxemic patient had a severe shock reaction. Their summary of advantages was: Painless; patients cooperate well; are able to eat, read, etc. Relatively simple to administer for those skilled in the method, no depressant effect on baby, good for tubercular patients. Disadvantages: Possible danger in administration, time of operator is monopolized too long, long second stage or forceps used more often. Subjective pain invalidated as guide to labor progress. McCormick of Indiana University presented other advantages and disadvantages, and suggested a variation of the method. He reported that the bladder urge is lost, and the patients have to be catheterized more often. He pointed out that Manalan used a larger needle for the caudal injection, inserted a nylon catheter through the needle and withdrew the needle, leaving the catheter in place instead of the needle. This eliminated the complication of broken needles, which had been encountered to some extent.

Lundy of Mayo's Clinic reviewed the literature and presented a detailed catheter method, in May, 1943. He recommended a preliminary medication of 1.5 to 3 gr. pentobarbital sodium, usage of number 5 ureteral catheter of nylon or silk, a slower injection of the solution for less reaction effect, and warming the solution for quicker effect. He also recommended 1 cc of 1:2600 epinephrine to 66 cc solution of metycaine to minimize the effect on the blood pressure.

Siever and Mousel, of the Brooke General Hospital, Texas, reported their use of continuous caudal analgesia in 300 cases, in 288 of which the analgesic was complete, and in 12 of which a supplementary anesthetic was used. The points they stressed were: Anesthetic level should be maintained midway between the symphysis and the umbilicus; that the labor progresses normally until the cervix is dilated about 7-8 cm., then there is a definite lag in progress for several hours, so that at this point they rupture the membranes artificially, and thus hasten this portion of labor; they also point out that when the head is on pelvic floor, the patient does not have the urge to bear down as she does in other analgesic methods, so that if this condition is not noted, the patient may remain thus for several hours. For-

ceps are used to aid delivery in the primipara; voluntary pushing by the multipara will frequently accomplish the delivery. Other points they make are that the total length of labor is increased, that the babies are in excellent condition and that they had no maternal or fetal mortality. They added 2 minims epinephrine in 25 cc. solution. Three cases of eclampsia were treated by them with excellent results, the convulsions having stopped within 10-15 minutes, the blood pressure dropping from 200 to 130, and being kept at that level. This treatment of eclampsia may be a most important by-product of this new method of analgesia.

Block and Rostein of Baltimore reported a new technique of administration and a more reliable test for determining the fact of whether or not the needle was in the spinal canal before injections are given. They used the principle of continuous drip from a flask of solution suspended above the patient, and after the needle was in place, they allowed the solution, first using a physiologic solution of saline, to drop without restriction and they counted the number of drops per minute which flowed. They used control tests in which they punctured the spinal canal and counted the drops also, and they arrived at a very definite result that there is a marked difference of rate of flow of fluid into the spinal canal and into the caudal canal. The rate of flow into the caudal canal was in most cases between 80 to 110, while the rate in the spinal canal was never below 200, the average being about 230. Occasionally in the caudal canal the rate was found to be more than a hundred, but if a recount were made in 3 minutes the rate always dropped below 100. To set a top limit of 150 as a safe margin for diagnosing that the needle was in the caudal canal, and a lower limit of 200 for the spinal canal, thus they had a wide margin of safety. If the drops were below 150, they then discontinued the saline which was used for the test, and introduced 1% procaine, 30 drops per minute for 20 minutes, then 15 drops per minute, varying as necessary to maintain the analgesic level at or below the umbilicus. They noted in their series of patients that: the length of labor was shorter, the method was safer with the drop test, the babies were all in good condition, there was less bleeding.

Parrett of White Memorial Hospital in Los Angeles, added his comments on the cases he had had, stating that he found more posterior positions that had to be turned manually, and that he found less bleeding during labor with the caudal analgesia.

After Hingson and Edwards presented their original paper in September 1942, they went to various hospitals teaching their method to obstetricians and staff members. Then in October 1943, they presented a report of the method which had been used and reported to them in more than 10,000 cases. Their article presents a few improvements in the method, the indications for its use, all complications encountered and advantages and disadvantages of the method. Of the 10,000 cases reported, 1150 were their own cases. In their own cases 91% were satisfactory in every respect, while 9% required supplemental anesthesia. Their method was essentially the same as the original method presented, with the skin being painted with ether and antiseptic, special reinforced malleable needles being used, 30 cc of 1.5% metycaine without epinephrine being used first, and 20 cc added every 40 to 90 minutes as needed (solution made with 2 gm. metycaine in 125 cc isotonic saline solution.) Sulfathiazole ointment 5% is applied around the site of the needle entrance into the skin. The patient is kept on her side through out labor, and is turned on her back only when ready for delivery, after the needle has been pulled out.

Indications: Premature labor, to insure no depressant effect on baby, cardiac and tuberculosis patients, eclampsia, Cesarean sections.

Contraindications: Infection in injection site, anatomic anomaly of spine, spinal fluid aspiration is an absolute contraindication, cocaine sensitivity, anemia, severe hysteria, central nervous disease, previous meningitis or encephalitis, placenta previa (unless Casarean section is to be done.) Fetal disproportion, extremely obese patient, no more than three attempts to insert needle in canal indicated.

Advantages: Painless, no harm to mother or baby, bleeding less.

Disadvantages: Forceps required more often, posterior position often persists.

Complications: Broken needles (eight in early cases, none in last 1000). Prevention: improved reinforced needles, use only five times, Epidural infection, six cases, one death, treated with sulfonamides. Unilateral analgesia, 5%, relief on dependent side, which may be prevented by rotating the needle or turn patient on other side, backache 5%, bladder reten-

tion 3%, dermatitis 2%, convulsions 2%, when injected into blood vessel, patients recovered satisfactorily, transient headaches, less if the injection is slow. Nausea and vomiting 20% at some time during labor, if blood pressure dropped more than 20 points in 27%, if blood pressure below 90, use 25 mg. ephedrine intramuscularly 10 minims 1:1000 epinephrine in 125 cc. solution.

In November 1943, Gready of Chicago Lying-In Hospital presented an article dealing with the various complications encountered in the use of the method, in detail as to diagnosis and treatment of each. The complications presented were: Subdural injection, epidural infection, intravenous injection, idiosyncrasy, broken needle, blood pressure changes and antesacral injection.

A brief comparison of advantages and disadvantages of the catheter and needle methods were presented as follows: Needle Advantages: Simple to insert, less trauma; Needle Disadvantages: Breakage, puncture dura; Catheter Advantages: Free movement of patient, less danger of perforation of dura; Catheter Disadvantages: Larger needle necessary, therefore more trauma and more difficulty of insertion into the caudal canal, with increased incidence of infection. The ideal method would be the usage of a 16 gage needle, with catheter insertion.

The final article on the subject is by Vaux at the Philadelphia Lying-In Hospital, where Hingson and Edwards are now working and teaching postgraduate courses in their methods. The article deals with the blood loss during labor when caudal analgesia is used. Statistical proof is reported that blood loss is much less with this method.

In conclusion I would summarize by stating that continuous caudal analgesia is a very great forward step in the problem of obstetric analgesia, being relatively simple to use, offering complete relief from pain in labor, being harmless and non-depressant to the baby, and being a new method of treatment of the dreaded eclampsia of pregnancy. One of the principal objections to its usage is the fact that the obstetrician has to be near the patient the entire time of labor, and this is not possible at all in these wartimes, even if it were in peace times. Undoubtedly the method will be worked out so that the physician will not have to remain with the patient continuously and this method of obstetric analgesia will assume its place in the obstetric analgesic procedures used in hospitals.

Bibliography will be furnished upon request.

USE OF PENICILLIN IN TREATMENT OF VENEREAL DISEASES AND DERMATOSES AT FORT KNOX

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Patients at Fort Knox with venereal disease are sent into the Genito-Urinary Clinic for diagnosis. The discussion and figures will be limited primarily to the cases of gonorrhea. Previous to the 18th day of February 1944, on the venereal disease service, the following routine was followed: Following diagnosis of "new" gonorrhea, the routine gonorrhea patient was sent to his unit dispensary for a course of sulfathiazole. The dosage, grams one, four times a day, for five days.

At the end of the five days of treatment at his dispensary, the patient would be observed for fourteen days. If, during that period of observation, he was found to have a urethral discharge, he would be sent back to the Clinic, and if found positive by smear, this treatment at the dispensary would be repeated. The dosage again was grams one, four times a day for five days. Following the second course of treatment he would again be observed for a period of fourteen days. If, following the second course, he again was found positive, he would be admitted to one of our venereal wards. The treatment then in the hospital consisted of two grams of sulfathiazole four times a day, for five days. If this did not stop the patient's discharge, as determined by urethral smears and cultures, he would be taken before a disposition board for transfer to a General Hospital for fever therapy. While the patient awaited transfer, sulfanilamide occasionally would be given in the same dosage as sulfathiazole. That is, two grams four times a day, for five days.

Much time was lost in transferring these patients to a general hospital.

Following the initiation of penicillin therapy, in treating sulfa resistant gonorrhea here at this hospital, the patient was never allowed to have more than one course of sulfa therapy as an out-patient, grams one, four times daily for five days,

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but he would be admitted to a venereal disease ward if he was still positive following the first course.

In the hospital, as soon as the patient was admitted, he would be given a five day course of sulfathiazole, grams two Q. I. D. On the 6th morning, if the patient's smear was positive, we would give him penicillin therapy that day. If not positive, he would be checked on the 8th day, and on the 9th day, and if he again was negative on those days, he would be discharged. Therefore, every patient that was given penicillin here, was sulfathiazole resistant, and had had a total of not less than 120 7.7 grain tablets of sulfathiazole. The patients are given a urethral smear and it is found positive before they are permitted to have penicillin therapy. The so called non-specific urethritis patient, the one with the semi-clear-watery discharge, is not given penicillin and therefore is not included in the group being presented.

ADMINISTRATION: Administration of penicillin for gonorrhea is entirely by the intramuscular route and all given intragluteally.

The powder is diluted with either sterile distilled water or tenth normal physiological saline to 20 c. c. making 5,000 Oxford units per c. c. and given in 4 c. c. or 20,000 Oxford unit dosages at intervals. This interval between intramuscular injections first was three hours. This has been cut to two hours for some patients and to one and one half hours more recently for some cases. Our results are good, we are sure, and apparently better than we had with the three hour interval of administration. Apparently our figures for the past thirty or forty days are going to be better.

We store penicillin in a regular electric ice box and keep the ampule sealed, of course, until time for treatment. The drug is hygroscopic and loses activity when exposed to the air. It is mixed by adding the solvent or diluent, and then placing all the solution in a rubber stopper sterile bottle for further withdrawal and administration.

If there is going to be any interval of great length between injections, the solution already mixed is stored in the ice box.

We receive here only the 100,000 Oxford unit ampule. We are not given any of the 25,000 Oxford unit ampules which I understand are, and will be, available.

REACTIONS TO PENICILLIN: As is shown now in most of the more recent literature, most of the reactions noted, seem to be with a definite "batch" of the drug. Some ampules appear, as a whole, darker than others. Whether the reactions are, as is alleged by some writers, due to impurities rather than the drug itself, as is the brownish coloration due to impurities, cannot be verified or denied by our work. It was observed that the majority of the few reactions noted, however, seemed to be with one certain group of ampules, all from the same pharmaceutical house. Our experience with reactions due to the drug have been conspicuous by their rare occurrence. The following are the reactions usually reported, and our findings in one hundred and sixty gonorrhea patients treated as mentioned above.

1. We have had one man with chill and a temperature of 102 degrees following by two hours his last injection of the drug, otherwise he was asymptomatic.

2. We have noted no change in the blood picture but our investigations and observations have not been exhaustive in this respect. We do get a routine count on these patients before treatment to determine whether there is an agranulocytosis from the sulfa drug. We have followed treatment with routine urines and blood counts, on some, with normal findings.

3. Burning pain at the site of injection; we have seen this in roughly 80 per cent, that is, on questioning. 15-20 per cent would have complained of it without being questioned.

4. One man complained of a severe headache for 48 hours, not relieved by analgesics.

5. Faintness and flushing of the face; none noted.

6. Unpleasant taste in the mouth; noted in two individuals.

7. Tingling in the testes; this was mentioned by two patients.

8. Muscle cramps; three complained of this, cramps in the hamstrings on the same side as the injection and lasting only 10-20 minutes following the injection.

9. Urticaria and abdominal cramps; none noted.

10. No phlebothrombosis has been noted.

In one patient we noted a rather unusual reaction. A reaction not found in anything I've read. He was one of the first men treated and during treatment became euphoric and hilarious for a short time. He sat in bed and laughed quite boisterously and we were convinced he had

had no stimulants or depressants prior to his treatment.

PENICILLIN RESISTANT PATIENTS: To date, we have treated 160 sulfa resistant cases of gonorrhea here. Our results are as follows:

1. Seven patients did not respond to 1st course of penicillin.
2. Five of the 7 did not respond to the 2nd course of penicillin.
3. Four of the 5 did not respond to the 3rd course of penicillin.

Those four were transferred to a general hospital for fever therapy, two of the four had been to a general hospital previous to our treatment with penicillin. One had penicillin at a general hospital the first time, the other had had fever therapy. They both were apparently cured, but later came to us. Of the total four sent to a general hospital, three responded to fever therapy. One was returned to this post and came in on the 3rd day with a positive smear again. He was given sulfa-therapy, was apparently negative and he and his unit went overseas. Incidentally he wasn't one of the first two that went to a general hospital.

STATISTICS: 4.3% were resistant to the first course of penicillin.

3.1% were resistant to the second course of penicillin.

2.5% were penicillin resistant.

OTHER THAN GONORRHEAL URETHRITIS PATIENTS: The army was fast in accepting the use of penicillin, and in order to prevent waste and gross misuse of this new therapeutic agent, certain regulations and suggestions were given us to follow. Those regulations have been our guide, and limited the exercising of our scientific curiosity at times. More recently we have been given permission to use the drug a little more freely. This brings us to the following group of venereal and dermatological patients.

We have had four patients with gonorrheal arthritis. Two patients had sulfa therapy with poor results, with no improvement. One of the two had typhoid therapy with no improvement. Two patients were symptom-free and no apparent residual after two courses of penicillin. The dosage was one hundred thousand Oxford units on the first day and none on the second, and 100,000 units repeated on the third day. The route was intramuscular. One patient cleared, apparently, with no other therapy than penicillin, and cleared rapidly. We have the fourth patient under observation.

Two patients with phagedena were treated (both having three venereal diseases). These patients had destructive penile ulceration and the ulcers progressed under sulfa therapy and mapharsen 0.06 gms. three times weekly, 0.20 gms. of bismuth subsalicylate once weekly, local therapy of soaks and calomel powder. Therefore the patients were given penicillin; 200,000 units. The first 100,000 was given on the first day, the second 100,000 on the third day. The results were excellent with fast healing.

There were two cases of lymphogranuloma venereum. Our findings here are going to be satisfactory, I believe. However, they are all under observation yet. We plan in the event of a large fluctuant node, to aspirate the purulent material and replace it with a penicillin solution. These patients have only been given two ampules also and they appear to be improving. Our dosage may in some cases, have to be larger. We have given this intramuscularly on the first and third days also.

PENICILLIN TREATMENT OF DERMATOSES: We have had ten patients on the dermatology service who have received penicillin therapy.

Four patients had chronic recurring furunculosis. Two of these were given 100,000 units intramuscularly with disappearance of the lesions in a short time. One had 200,000 units, and another had 240,000 units. Three of these patients had had autogenous vaccines and all the usual therapy, sulfa therapy etc. The other patient had not had autogenous vaccine at any time but had had a lot of therapy and had had the furuncles for four months. He cleared with 200,000 units.

The organisms were hemolytic streptococcus and hemolytic staphylococcus in all cases.

There are three patients that received penicillin intramuscularly for severe pyoderma superimposed on another type of dermatitis. Our original dermatitis was an eczematoid type in one and the other a dermatitis venenata due to Rhus diversiloba, the third a tricophytosis. These were all severe and two responded very well to 200,000 units of penicillin. The third with secondary infection of tricophytosis cleared with six injections of 10,000 units each.

Lastly, there were three patients treated by topical applications. Two had psychosis barbae, and one had impetigenized eczematoid dermatitis. The strength of the solution used in 500 Oxford units per

c.c. A one hundred thousand unit ampule makes 200 c. c. of the solution. We have a number of patients under treatment with similar dermatoses and similar findings.

Conclusions: We certainly have a valuable addition to our therapeutic agents in penicillin. A great amount of further investigation is needed. We must remember, I believe, that we are on the upswing of the curve of enthusiasm and should remember that the laboratory and bacteriologist can tell us a lot as to when the drug is indicated.

It is saving the Army many man days and untold expense. We are, in venereal therapy, seeing very promising results, and perhaps, with increased supply of the drug, we may only hospitalize patients for 12 hours for the initial treatment of gonorrhea. We undoubtedly see less prostatitis, seminal vesiculitis, and epididymitis, than previous to penicillin. I don't know about the occurrence of arthritis. We will probably see as much.

We may also see the development of a penicillin resistant strain of gonococci.

There is one question that has arisen in my mind, that is, the confusion that we may see as a result of penicillin therapy in regard to serology and possible masking of the positive serologies.

This drug certainly promises to be of value to the dermatologist.

COLLOIDS, THE BENZENE RING AND THE INDUCTION CURRENT IN CANCER

R. Alexander Bate, A. B., M. D.
Louisville
Quondam Professor of Materia Medica and Applied Therapeutics, University of Louisville

In cancer, it is believed that the physiologic forces have become the prey of pathologic powers.

"Human body" electricity, discovered by Jabard in 1856, in the forces of kariokinesis, acting according to physical laws in the circumstances of imbalanced cell constituents of normality, result in the pathologic cancer cell.

The pathognomonic features, of which are polypolarity and mitotic clumping of chromatin in the various phases of mitosis, through the influence of an indirect or electric current of induction in colloid tissue.

The disease may be acquired, or may be hereditary in so far as endocrine dysfunction is responsible for the chemical or electrical alterations, which permit of carcinomatosis.

Read before the Louisville Society of Medicine.

The proof of the premises of this paper are too lengthy for elaboration, at this time.

The academic subjects of colloid, and of the induction current require only restatement of facts as related to the physiopathology of cancer.

The work of Prof. C. P. Rhoads, of Cornell University, is accepted as pathological authority for the benzene ring derivatives as a cause of cancer. (Bulletin of the New York Academy of Medicine, January 1942.)

He initiated cancer in healthy, normally nourished animals by injecting into them the dye, butter yellow of common use, a member of the benzene ring series. By a second step in the experiment, at the same time he injected the butter yellow, he administered carriers of the hydroxyl O H, in the form of liver hormones and vitamine B complex substances. No cancer developed in these instances.

His conclusions were that the (negative) hydroxyl ions overcame the "Mechanism of Conditioned Deficiency" created by Chemical Compounds which produced cancer.

Therefore laboratory proof may be claimed for the fact, that the benzene ring group are carcinogens. The modus operandi remains hypothetic as yet.

Thyroxin and glutathione are the natural hydrogen acceptors and oxygen donors to the tissues, hence they serve the same purpose as the hydroxyl group by taking away hydrogen and communicating oxygen.

Therefore, if the molecules of thyroxin and glutathione be absent, or be broken up by benzene derivatives, the natural antibodies to cancer will constitute a "mechanism of conditioned deficiency."

The factors of colloidism, or colloid degeneration and the induction current are merely classical facts to be restated and applied.

The Colloids

Colloids are found in pathologically increased proportions in all cancer cells. The increase varies from 25 to 75 per cent. The greater part of the colloid is in the form of cholesterol, which is unusual in its amphoteric quality of carrying either positive or negative charges, on the same molecule. In contradistinction to metal electrolytes which bear a constant charge.

Cholesterol is dielectric; that is, no direct current passes through it, but a current of induction is set up, which is the reverse of the direct current, or current of origination.

Hence in the newly induced current the poles of attraction and repulsion are reversed from the poles of normal physiologic activity.

Where the direct current operated as a positive pole, the induced current operates with a negative pole. Where the direct current operated with a negative pole, the induced current is positive.

So that the micellae, or molecules, of the cell, which may bear either positive or negative charges, will undergo a reverse cellular emplacement. Thus the micellae, formerly attracted, will now be repelled and vice versa. (The cancer cell therefore, appears negative in its structure.)

Cholesterol also is unique, in that it may form a ring of isolating molecules. Thus preserving cells from extraneous influences.

Starling says, "the complex molecules, which make up protoplasm itself, are all colloidal in character." It may be mentioned in passing that the thymus is the hormone of action in protoplasmic metabolism.

The complex phases of colloids have baffled summation; so that in cancer, its true relation has not been sufficiently studied.

Hemaglobin is a colloid, yet it may occur in crystalloid form.

Egg albumin is a colloid nearly identical with serum albumin, yet when injected into the blood, it will be eliminated by the membranes of the kidney. Apparently the conversion of the egg albumin is effected by some renal autacoid or hormone, which favors dialysis in the form of a watery solution, but the serum albumin remains in the blood.

The elements of albumin are hydrogen, carbon, oxygen, nitrogen and sulphur; each plays its part as a bearer of negative and positive ions.

Colloids are both liquids and solids and the molecules may vary greatly in size.

These molecules are the building materials of the cell, both of the cytoplasm and of the nuclei; and these molecules are emplaced by the influence of the polar attraction, or repulsion, along the lines of force, which the poles originate. Presumably the spindle, spireme or achromatic lines formed between the two poles, of each tissue cell, in the process of mitosis, correspond to the lines of force of the magnet.

Lecithin holds the cholesterol in solution and the complexity of the physiology is probably explained by the hydrogen carrying the oxygen liberating property of thyroxin, together with the hormones of the thymus.

Differentiation of the phases of mitosis is believed a function of thyroxin, with its iodine radicle. Without the iodine radicle the thyroid secretion is an inactive colloid itself. For future reference it is desired to note here, that if a solvent of iodine, like benzene, takes the iodine radicle out of thyroxin, all thyroid metabolic influence is lost. Glutathione, which is also a hydrogen acceptor and oxygen donor, exists in liver cells as a hormone, and in vegetable cells as a vitamin and possesses a sulphur radicle, which, just as the iodine radicle, activates the thyroid secretion, so the sulphur radicle activates the glutathione. Sulphur like iodine is also dissolved by benzene. These facts will again be referred to at the conclusion from the premises.

Returning to the colloids, if electrolytes in the form of calcium or sodium chloride be added to colloids, in excess of a physiologic requirement, jellification such as found in inspissated bile and gall stones; in calcium deposits in vascular, and in renal regions, may also be formed. Fowls die for this reason if fed salt. The action of the sulfonamine compounds act, in the same way, to produce calculi, as well as cancer. Colloidal solutions of both bases and acids in the blood, or other body fluids, if in excess of normality, may precipitate in this way. Electric currents activate these charges. So long as life exists there are body currents.

Colloids containing silicic acid and ferric hydrate do not possess the quality of reversibility, but remain dry and hard like the lichen of the trees; while colloids of the fungi, like the earth-star will dry, reabsorb moisture and soften again. These colloids retain water over a long period.

Dissemination of hormones and chalones is probably due to colloidal activity, which by absorption of the colloids permits an equilibrium to be obtained between a jell and a surrounding fluid, and thus the hormone influence is both begun and arrested.

Solutions of crystalloids, like granulated sugar, may pass through a colloid mass

without change, "but another may not dialize." Hormone therapy may be unlocked by the colloid key. Thus, before the central nervous system, the endocrine system through the colloids controlled life, and its movements. If this early form of life were cut into fragments, each fragment possessed of a nucleus or an area of attraction reassembled the original form. Cancer metastasis of the primary tissue may be a repetition of the same principle.

Colloids containing tannates, like tea, are not only impervious to other colloid solutions, but even to crystalloids. Viscosity is a colloid manifestation. Hypertension likewise falls under this category. Osmotic pressure, and too many to be mentioned, unexplained phenomena may be unlocked by the colloid key.

In cancer every physiologic phase of the colloids is of interest, especially the control by the thymus of colloid synthesis from protoplasm.

Polypolarity and the induction current each being susceptible of explanation on this basis.

Ultra microscopical particles of these colloids carry an electric charge, which according to acidity or alkalinity of the solution may carry either positive or negative charges.

This fact explains the paradoxical effect of the suprarenal causing the shortage of glycogen in the starved dog (with acidosis) and the liberation of glycogen in the well fed dog (with normal alkalinity).

Starling asserts, that both silicic acid and the hydrosol of gold, in the presence of a trace of alkali, are electro-negative, and that, if a current be passed through these hydrosols, colloidal particles (bearing their negative charges) pass to the anode or positive pole, where they are precipitated. Bilirubin-calcium of gall stones is a familiar illustration of the same principle.

In the acid solution protein particles carry a positive charge, while in an alkaline solution they carry a negative charge.

Hence the paradoxical effects of the hormone in health and in disease.

Starling says "The relation of globulin to acids and alkalies is similar to that of the so called amphoteric substances, such as the amino acids." These are the micellae essential to cell building in the processes of mitosis, which is the very seat of cancer pathology. This, probably, is the key to the calculous and carcinogenic entity of the sulphonamines.

Colloid aggregation, or clumping of the chromosomes in mitotic figures of cancer, are but differently charged and misplaced amphoteric molecules, resulting from the polypolarity induced by the induction current in the colloidal tissue.

The normal cell in process of building, it may be seen, possesses two types of electrolytic molecules, colloids and crystalloids. The colloid, which may carry either positive or negative and will change under polar influence; and the crystalloid which constantly carries the same charge.

Hence reversible polar influence results in the cell destruction of cancer.

These conclusions concerning the relation of colloid to cancer may be summed up as follows:

Colloids furnish the medium which compels the electric induction current, when approached by the direct current of normality. These in turn initiate the pathological changes of cancer.

The Benzene Ring: The configurated or constitutional molecule formula of the benzene ring series, exhibit the probable paths of the currents of "body electricity," which induces all cellular intercommunication and life. Body electricity is life, and with its departure there is no life.

These benzene ring electric circuits are identical with the closed voltaic current in its electro-magnetic influences, and are similar to the "electric shell" and the "solonoid." These also may be formed.

The benzene ring derivatives having been absorbed by the colloid cells, are activated by the only kind of electric current possible in colloid, which is the induced current, which is negative where the direct current was positive.

This accounts for the negative cancer cell with its reversed current, and the displacement of the building micellae, which are diverted by the inter-polypolar lines of force, into the paths of the resultants of the forces from the two or more polar systems.

Precipitations, cancerous debris, nucleated cells to form metastases, which reproduce cancer cells of the original chromosomes, or gene micellae of the cancer type, are pathologic findings.

Just like the nucleated segments of the unicellular animal, another unicellular carcinomatosis is effected by metastasis.

The Induction Current: It is the property of dielectrics to carry the induction current.

Certain bodies, like metals, carbon, the human body, water and other substances

irrelative to our subject are conductors of direct currents of electricity.

Others like the colloids, glass, rubber, silk, fats, air and some others, are non-conductors of the direct current, but subject to a current of induction, which is always the reverse, in its polarity and charge, to the direct current. In other words it is a negative current.

Friction induces electrification in certain circumstances and is one of the constant factors in cancer causation.

A direct current of electricity may not pass through glass or colloids, like micellae, but a "current of induction" may be induced, which is the reverse of the direct current in its magnetic field, which is the area of magnetic lines of force, created by the electric currents passing through tissue.

For instance the Leyden jar has positive electricity passed inside of the jar, and negative electricity appears on the outside.

Sulphur is two and half times as dielectric as air, which is the standard of measure of dielectrics.

The dielectric properties of all colloids, especially cholesterol of the tissues, thus explain the induction current of cancer in the abnormally colloid laden cell.

Thus the normal cell of the rat, in tar cancer of experimentation becomes a precancerous cell. The anoxemia induces colloid degeneration.

The benzene ring derivatives permeate the colloid cells. The closed circuit, of the carbon atoms of the rings, form replicas of the "closed voltaic circuit," which like the electric shell and the solonoids display polarity.

Conclusions: Thus, the three conditions named in the title of the paper, colloids, the benzene ring, and the induction current are seen to be essential factors in carcinomatosis.

Furthermore, it may be seen why the toxin of cancer has been overlooked, since it is purely a physio-pathologic one, involving the electric phases of mitosis, which are controlled by the body electric currents, operated through the influence of the endocrine system. The toxin of cancer, therefore, appears to be the induction current of the hyper colloidal cell.

It seems permissible, however, to mention that where Pathologist Rhoads induced cancer in animals by the injection of the benzene ring substance, butter yellow, and likewise arrested the formation of cancer, under the same circumstances by the use of the hydroxyl, or negative O H group, he was using the same depolarising effects of overcoming polypolarity as nature provides in its hydrogen carrying and oxygen donating hormones, thyroxin and glutathione.

Also, it may be emphasized, that benzene's power to dissolve iodine and sulphur, respective radicles of thyroxin and of glutathione may render nature's guardsmen, thyroxin, glutation and liver hormones, valueless.

If the apparent stages of experimental tar cancer have been correctly interpreted, it is probable, the same is true for all cancers, subject to local variations.

Certainly this solution appears to answer the equasion of acquired cancer.

Where hereditary influences, through the ductless glands, have created a "conditioned deficiency" as a "mechanism," as expressed by Doctor Rhoads, as permitting the deficiency in the O H, or hydroxyl group which permitted the butter yellow to excite cancer; it seems but another way of saying hormone imbalance is that deficiency.

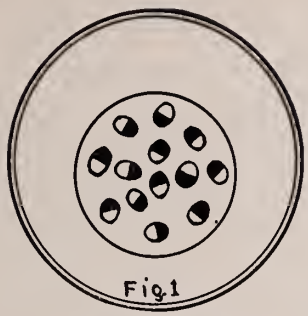
It appears that the thymus, the thyroid and the liver (or glutathione) constitute the seat of deficiency.

Colchicine arrests or delays mitosis at the stage of metaphase and should hold a place in the therapeutics of diseased states of mitosis.

In the lower orders of animal life in the unicellular forms, if the animal be cut into pieces, each piece with a fragment of the nucleus, will develop into another unicellular animal.

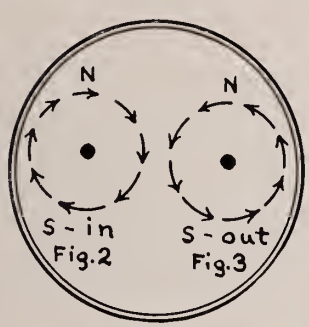
This quality inherent in primary tissue, may explain why the metastasized cancer cell is always a reproduction of the primary cell, molecules or genes, from which it was derived, a liver, uterus, etc.

The truth of these conclusions must await laboratory confirmation; but professional opinion upon an unsolved question like cancer pathology, is no more taboo than the expert testimony upon a hypothetical question; and it is hereby urged that every doctor be encouraged to consider the unsolved problems of medicine.



DIAGRAMATIC ILLUSTRATIONS

Figure 1 represents micellae of embryonic cell. These are amphoteric and may be attracted by either positive or negative electro-magnetic forces or poles.



Figures 2 and 3 represent a copper wire through which an electric current is passed "in" and "out" of a center of iron filings. When the current passes "in" as in figure 2, the N seeking pole of the needle points to the right, or clock-wise; when the current passes "out," or is reversed in its relation to the iron filings, the N seeking pole points to the left or counter clock-wise.

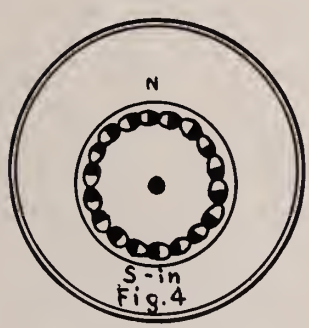


Figure 4 represents a cell through which a direct current of electricity has been passed inward and the micellae are emplaced with the positive poles of the colloid molecules clock-wise and the negative pole counter clock-wise and thus joined to each adjacent micella.

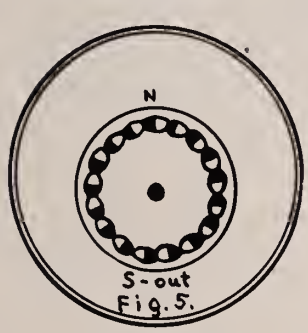


Figure 5 represents a cell through which an indirect electric current which is the reverse of the direct has been passed, and the micellae are emplaced counter clock-wise.
Hence it may be seen, that a destruction of the cell must follow the altered positive and negative molecular ionization and the displacement of normal building results in cancer debris.



Figure 6 represents the well known magnetic or electro-magnetic shell. In this configuration the arrangement is in lamellar distribution, with the N seeking pole "up" and the S seeking pole "down."
However, Loeb says "the lamellae are arranged in a core with the negative poles outward."
An indirect current would reverse the cell's polarity, as in figure 3.

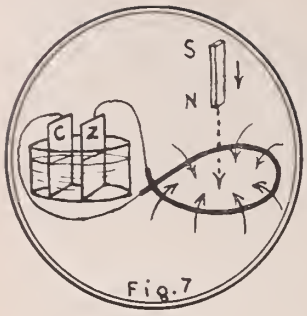


Fig. 7

Figure 7 represents the oft described closed voltaic circuit which is equivalent to a magnetic shell. "The strength of the magnetic shell depends upon the number of the lines of force." (Thompson). Its action in a cell is that of a magnetic shell.

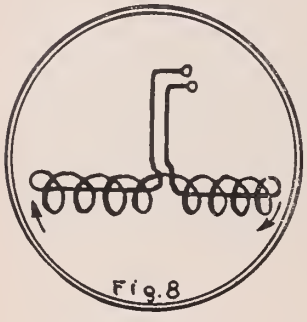

Fig. 8

Figure 8 represents a solenoid, which has two poles and a neutral equatorial region. It attracts and is attracted like the ordinary iron magnet.

When the colloid micellae are greatly increased in a cell, which has undergone colloid degeneration, as in experimental tar cancer, and the colloid has reached a proportion through which a direct electric current can not pass, then an indirect current is instituted in the colloid micellae.

Each of these three electro-magnetic forces may result in polypolarity in the cell.

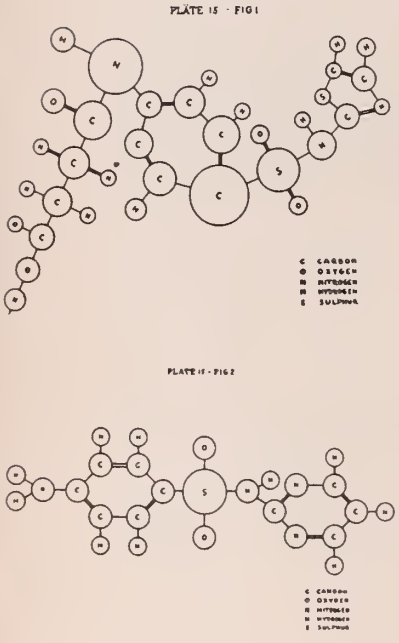

PLATE 15 · FIG 1

PLATE 15 · FIG 2

Figures 9 and 10 represent the configurated formulae of two often used sulfonamine compounds. These like all solutions with a benzene ring may saturate the colloid micellae to the exclusion of all other solutions. The configurated arrangement of the atoms of carbon, oxygen, nitrogen, hydrogen and sulphur, indicate the probable path of the body electric current—whether direct or indirect. The carbon rings are conspicuous in the arrangement of the formulae. It is conceivable, polypolarity in such cells may be induced by either a magnetic shell arrangement of the micellae, by a "closed voltaic circuit" or by a solenoid with its multiple area of attraction, or poles.



Figure 11 is a schematic representation of the clumping of the chromosomes, or mitotic figures of cancer, produced by the resultant of the lines of force occurring in a cell possessing the polypolarity of cancer. Thus colloids, the benzene ring and polypolarity of a cell may account for carcinomatosis. The law of segmented nucleated animal life may account for metastatic cancer.

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COUNTY SOCIETY REPORTS

Boyd: The regular meeting of the Boyd County Medical Society was held on Tuesday, October 3rd, at the Henry Clay Hotel. The meeting was called to order by Proctor Sparks and the minutes of the previous meeting were read and approved. S. C. Smith, delegate to the State Medical Association meeting, reported on the meeting and gave a complete resume of the events which occurred. The report was discussed by several of the members.

Dr. Charles A. Hoffman, Huntington, West Virginia, gave a very interesting paper on the Transurethral Resection of Prostate. He discussed indications and contraindications of this operation and exhibited the instrument commonly used in performing it. The paper was freely discussed by members present and much enjoyed.

Sergeant T. D. Goodman, Jr., of U. S. Army, son of Dr. T. D. Goodman, gave a very interesting account of his experiences in Australia and New Guinea. Among other things he recounted some of the tribal customs of the Australian aborigines, and described a native celebration in which circumcision was performed on young boys with the stone knife which he displayed. He discussed other customs and usages of these people such as isolation of diseased patients. He also showed some pictures of war zones taken in the South West Pacific. His discussion was very much enjoyed by the society.

No further business was brought before the society and the meeting was adjourned.

Price Sewell Jr., Secretary.

Campbell-Kenton: The regular monthly meeting of the Campbell-Kenton County Medical Society was held at St. Elizabeth Hospital on October 5, 1944 with nineteen members present. In the absence of the president and vice president, the meeting was called to order by the past president, Dr. John Rolf, at 9:05 P. M.

The minutes of the previous meeting were read and approved.

The following communications were received: The 1944-45 Scientific Program of the Academy of Medicine of Cincinnati together with a letter inviting our members to attend the meetings and offering to send announcements of the meetings to any of our members who would furnish their names and addresses.

A letter from Guy Aud, Louisville, offering his assistance in setting up the cancer clinic at Booth Hospital.

A reprint from the Mississippi Valley Medical Journal concerning County Medical Society Life Membership.

It was suggested by the secretary that an addressograph be purchased and that a cor-

responding secretary be employed. It was moved by William R. Miner and seconded by J. H. Caldwell that the secretary be empowered to purchase an addressograph and employ a corresponding secretary, at the rate of $10.00 per meeting per month provided the necessary funds were available. The motion passed.

The program of the evening consisted of an instructive lecture by Major Reback, Neurologist, Nicholas General Hospital, Louisville, on "Convulsive States." A generous discussion followed.

There being no further business, the meeting was adjourned.

Robert L. Biltz, Secretary.

Daviess: The Daviess County Medical Society held its regular semi-monthly meeting on Tuesday, September 26th at the Hotel Owensboro. Dinner was served at 6:30 P. M. after which the regular business meeting was dispensed with and J. C. Pennington, guest speaker from Nashville, gave a timely discussion on "Socialized Medicine." In the absence of our President George Ward Disbrow, Vice President William Louis Woolfolk presided.

Frank J. Condon, Secretary

Henry: The regular meeting of the Henry County Medical Society was held at the Castle Hotel Tuesday evening at 7:30, September 12, 1944. Dr. Skidmore was host and a delicious dinner was served. Members present were as follows:

A. P. Dowden, R. J. Skidmore, J. C. Hartman, W. F. Carter, Otto Cubbage, J. L. Karnes, O. P. Chapman, and Owen Carroll.

Guests present were as follows:

Mesdames Dowden, Skidmore, Hartman, Carter, Cubbage, Karnes and Carroll.

The meeting was called to order by the President, J. C. Hartman. The Secretary, Owen Carroll, stated that there was in the treasury $26.35 left from participation in the Group Medical which had not been distributed and that it was his suggestion that it be placed in an emergency fund for the Society. O. P. Chapman made a motion to that effect which was seconded by W. T. Carter and unanimously carried.

J. C. Hartman made a very gracious presentation of the host, Dr. O. P. Skidmore, who gave a very interesting and illustrated talk on "Preventive Dentistry," which was followed by round table discussion of the subject.

Owen Carroll, Secretary

Letcher: The Letcher County Medical Society met in regular session, Tuesday, September 26, 1944 in the Fiscal Courtroom at the Court House.

The meeting was called to order at 8:30 P. M., by Dr. T. M. Perry, President.

Members present were: T. M. Perry, E. K. Munn, H. H. Howze, J. W. Turner, F. L. Wommack, B. C. Bach, J. E. Crawford, E. G. Skaggs, Lee Moore, Owen Pigman.

Minutes of the previous meeting read and approved. Then followed a discussion by the members present, subject being ethics in medicine, by-laws of county societies and State Medical Association, contrasting private practice and industrial practice in the coal fields in regard to collection and dispensation of medical fees, etc.

Owen Pigman, Secretary

Madison: The regular meeting of the Madison County Medical Society was held in Richmond September 14.

A program for the year was discussed and a resolution was adopted requesting the Tuberculosis Commission to designate this county as a site for one of the State Tuberculosis Sanatoriums.

Charles J. Grubin, Secretary

Shelby: After the summer vacation the Shelby County Medical Society resumed the meetings on Thursday September 28, with Dr. E. S. Allen as host; the following members were present: Drs. Carroll, Dowden, Smith, Sleadd, Richeson, Lesile, Alexander, Mack, McMunn, Nash, Weakley, Hughes, Morris and Risk.

After a delightful dinner which was served in the Presbyterian Church in Shelbyville the Society was called to order by the Vice-President, Dr. McMunn.

At this time Dr. McMunn introduced Dr. E. S. Allen, the host and essayist, who read a paper on "Appendicitis in Children." The paper was freely discussed by the members and was much enjoyed.

The Secretary stated several members of Shelby County had mentioned the change in the name of the Society to a tri-county to include Henry and Oldham Counties. Several members being present from Henry County stated due to the fact that their County Society was very active they didn't think they would be interested in forming a tri-county. The members from Oldham were more interested in the union so the President appointed a committee of Drs. Nash, Mack and Alexander to make recommendations at the next meeting.

The Secretary was instructed to ascertain from Dr. Blackerby if a union was made with Oldham County if the Society would be entitled to more than one delegate to the State meetings.

C. C. Risk, Secretary.



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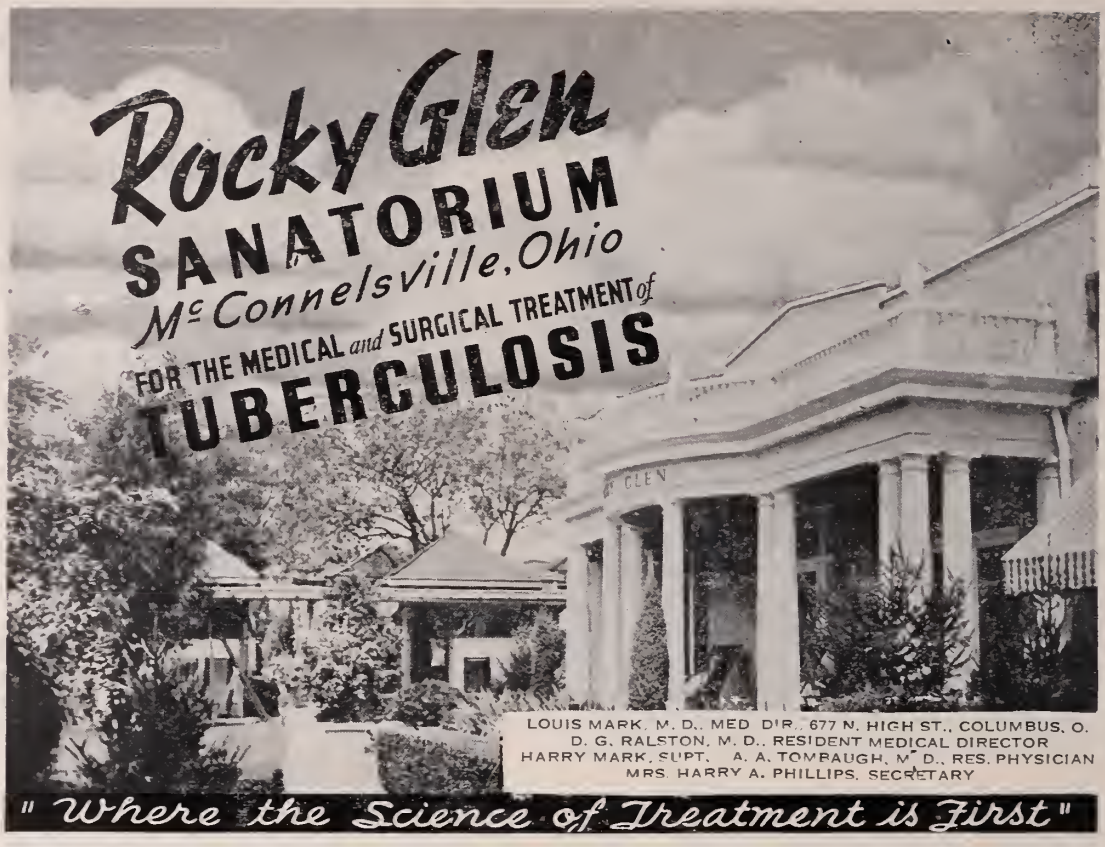
Lexington, Kentucky

Dr. George S. Sprague, the psychiatrist in charge of the New York Hospital's psychiatric department for men, in White Plains, New York, for the past ten years, announces that he has acquired the ownership and superintendency of High Oaks Sanatorium from his father, Dr. Geo. P. Sprague. This institution established for the treatment of mental or nervous illnesses and liquor or drug addictions, will continue to operate as a reliable, scientific, modern hospital. It meets the requirements of personal comfort in homelike surroundings, while providing also the various treatment measures which may be indicated for each patient individually.

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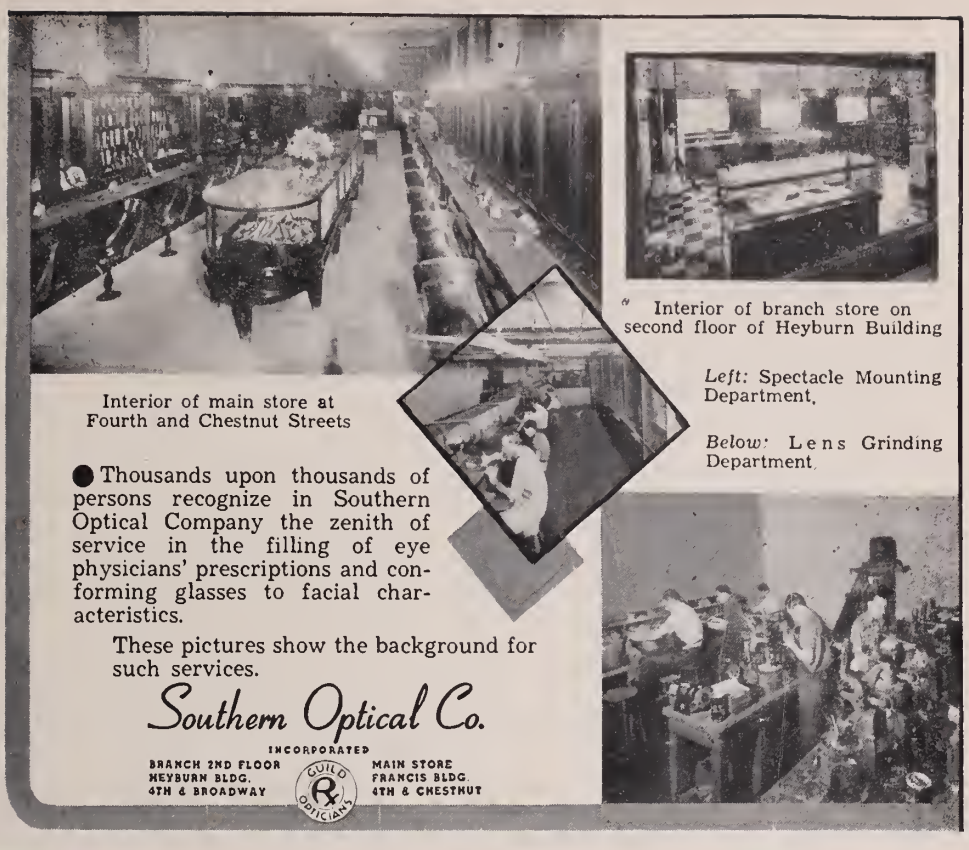
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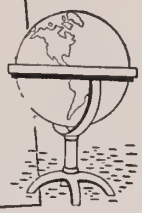


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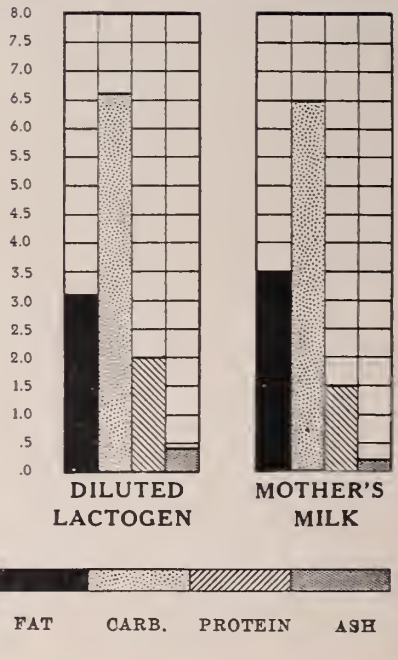




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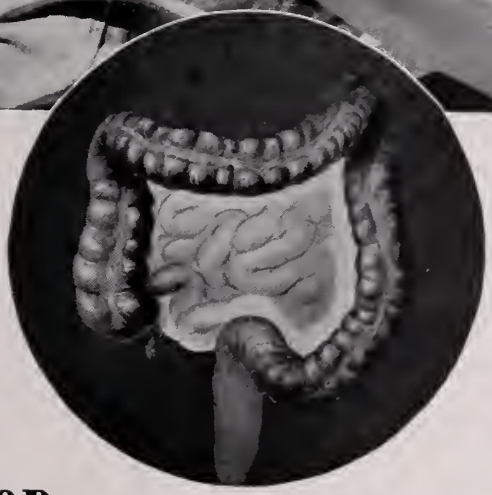


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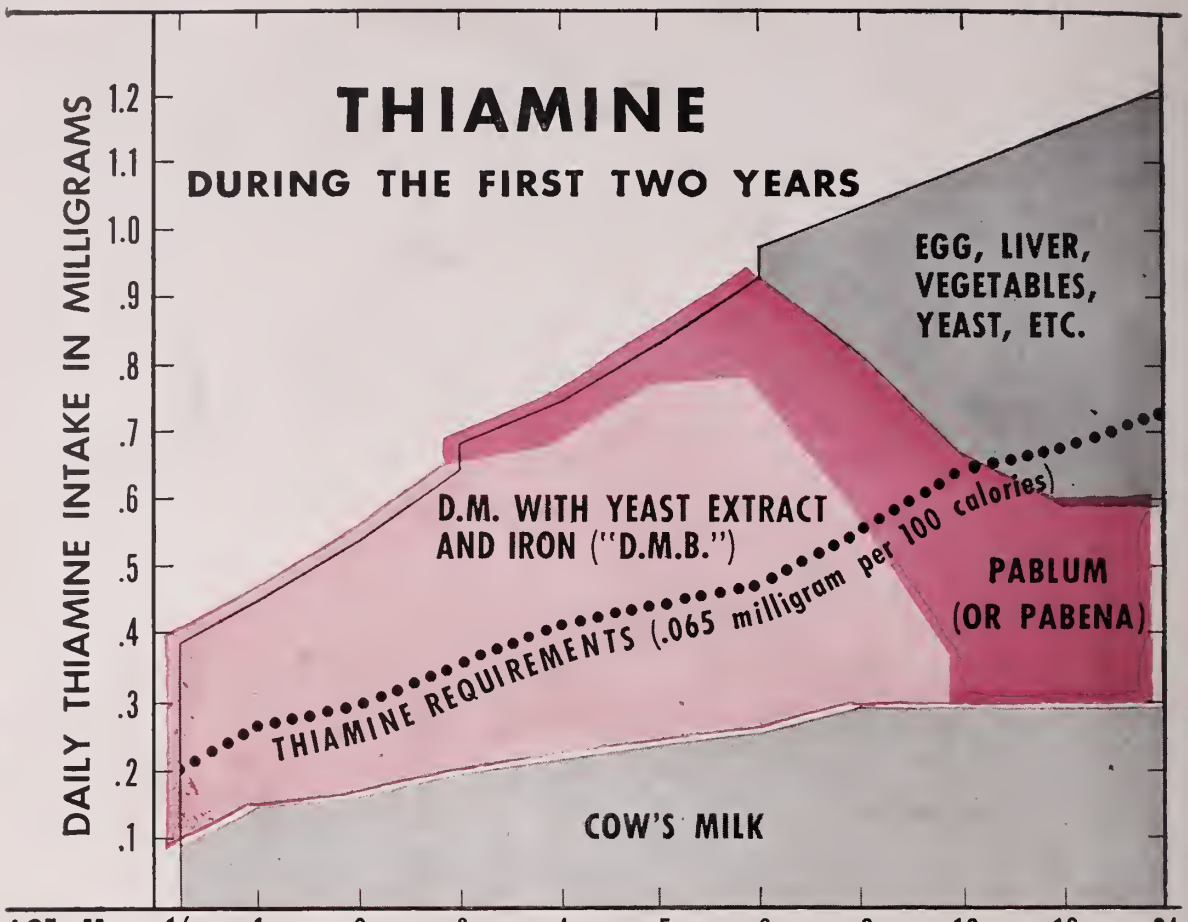
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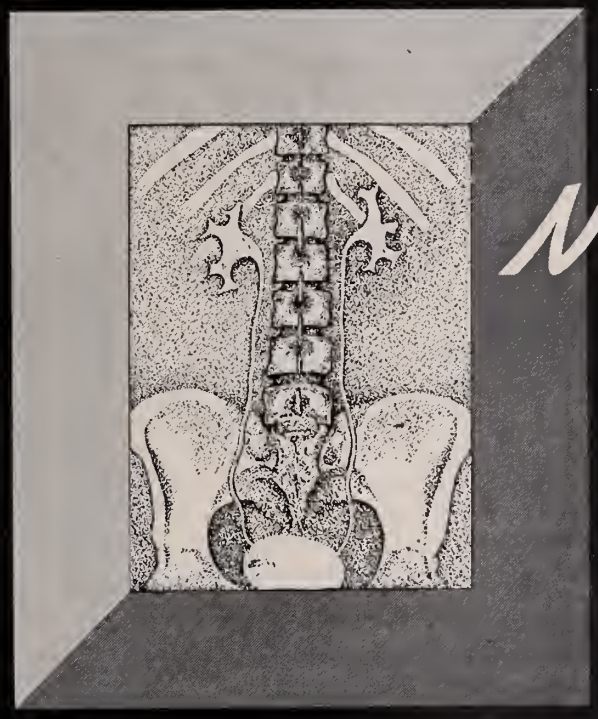
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	Dry Ovaltine	Ovaltine with milk		Dry Ovaltine	Ovaltine with milk
PROTEIN	6.0 Gm.	31.2 Gm.	VITAMIN A	1500 I.U.	2953 I.U.
CARBOHYDRATE	30.0 Gm.	62.43 Gm.	VITAMIN D	405 I.U.	480 I.U.
FAT	2.8 Gm.	29.34 Gm.	THIAMINE	.9 mg.	1.296 mg.
CALCIUM	.25 Gm.	1.104 Gm.	RIBOFLAVIN	.25 mg.	1.278 mg.
PHOSPHORUS	.25 Gm.	.903 Gm.	NIACIN	5.0 mg.	7.0 mg.
IRON	10.5 mg.	11.94 mg.	COPPER	.5 mg.	.5 mg.

Sustained TIMED *diabetic control*

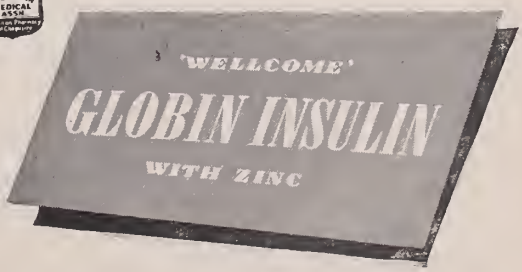


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'Wellcome' Globin Insulin with Zinc is a clear solution and, in its freedom from allergenic properties, is comparable to regular insulin. It is accepted by the Council on Pharmacy and Chemistry, American Medical Association, and was developed in the Wellcome Research Laboratories, Tuckahoe, New York. U. S. Pat. No. 2,161,198. Available in vials of 10 cc., 80 units in 1 cc. 'Wellcome' Trademark Registered

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COST

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. . . *because* it effectively relieves symptoms and apparently produces no more untoward reactions than do natural estrogens, your patient's COMFORT is assured.

. . . *because* it is very moderately priced in both tablets and solution, COST, as a possible objection, is ruled out.

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*Reg U S Pat Off The trademark OCTOFOLLIN identifies the Schieffelin brand of Benzestrol.



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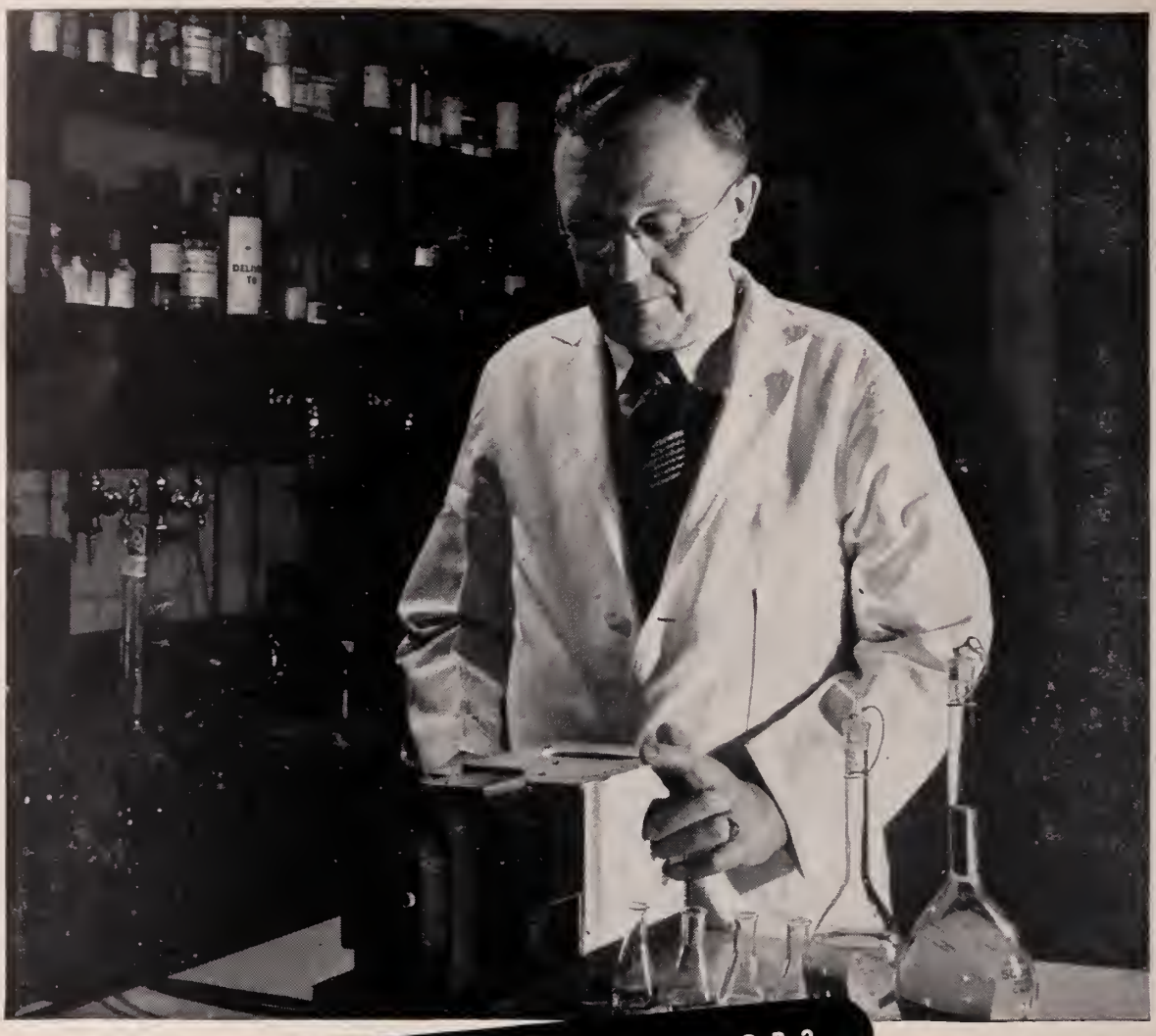
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Founder

Will Camp, M. D.
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5. Depression associated with menstrual dysfunction.

6. Reactive depression precipitated by an external problem situation which the patient can neither resolve, tolerate, nor ignore.

*Guttmann, E. and Sargant, W.—B. M. J., 1:1013, 1937

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CALENDAR OF COUNTY SOCIETY MEETINGS

COUNTY	SECRETARY	RESIDENCE	DATE
Adair	W. Todd Jeffries	Columbia	December 6
Allen	A. O. Miller	Scottsville	December 27
Anderson	J. B. Lyen	Lawrenceburg	December 4
Ballard	F. H. Russell	Wickliffe	December 12
Barren	C. R. Markwood	Glasgow	December 20
Bath	H. S. Gilmore	Owingsville	December 11
Bell	Edward S. Wilson	Pineville	December 8
Boone	R. E. Ryle	Walton	December 20
Bourbon	D. B. Thurber	Paris	December 21
Boyd	Price Sewell, Jr.	Ashland	December 5
Boyle	P. C. Sanders	Danville	December 19
Bracken-Pendleton	W. A. McKenney	Falmouth	December 28
Breathitt	M. E. Hoge	Jackson	December 19
Breckinridge	J. E. Kincheloe	Hardinsburg	December 14
Bullitt			
Butler	D. G. Miller, Jr.	Morgantown	December 6
Caldwell	W. L. Cash	Princeton	December 5
Calloway	J. A. Outland	Murray	December 7
Campbell-Kenton	Robt. L. Biltz	Newport	December 7
Carlisle	E. E. Smith	Bardwell	December 5
Carroll	H. Carl Boylen	Carrollton	
Carter			December 12
Casey	Wm. J. Sweeney	Liberty	December 28
Christian	William F. Fidler	Hopkinsville	December 19
Clark	W. Carl Grant	Winchester	December 15
Clay	L. H. Wagers	Manchester	December 12
Clinton	S. F. Stephenson	Albany	December 16
Crittenden	C. G. Moreland	Marion	December 11
Cumberland	W. F. Owsley	Burkesville	December 6
Daviess	Frank J. Condon	Owensboro	December 12 & 26
Estill	Virginia Wallace	Irvine	December 13
Fayette	Chas. D. Cawood	Lexington	December 12
Fleming	Roy Orsburn	Flemingsburg	December 13
Floyd	Robert Sirkle	Weeksbury	December 27
Franklin	E. K. Martin	Frankfort	December 7
Fulton	John G. Samuels	Hickman	December 13
Gallatin	J. M. Stallard	Sparta	
Garrard	J. E. Edwards	Lancaster	December 21
Grant	Lenore P. Chipman	Williamstown	December 12
Graves	H. H. Hunt	Mayfield	December 5
Grayson	E. B. Deweese	Caneyville	
Green	S. J. Simmons	Greensburg	December 4
Greenup	Virgil Skaggs	Russell	December 8
Hancock	F. M. Griffin	Hawesville	
Hardin	D. E. McClure	Elizabethtown	December 14
Harlan	W. R. Parks	Harlan	December 16
Harrison	W. B. Moore	Cynthiana	December 4
Hart	Vincent Carrao	Munfordville	December 5
Henderson	Walter L. O'Nan	Henderson	December 11 & 25
Henry	Owen Carroll	New Castle	December 14
Hickman	H. E. Titsworth	Clinton	December 7
Hopkins	Wm. H. Garnier	Madisonville	December 14
Jefferson	Richard T. Hudson	Louisville	December 4 & 18
Jessamine	J. A. Van Arsdall	Nicholasville	December 21
Johnson	Paul B. Hall, Act. Sec.	Paintsville	December 25
Knox	T. R. Davies	Barbourville	December 21
Laurel	Oscar D. Brock	London	December 13
Lawrence	L. S. Hayes	Louisa	December 18
Lee	A. B. Hoskins	Beattyville	December 9
Letcher	Owen Pigman	Whitesburg	December 26
Lewis	Elwood Esham	Vanceburg	December 18
Lincoln	Lewis J. Jones	Houstonville	December 15
Livingston	T. M. Radcliffe	Smithland	
Logan	E. M. Thompson	Russellville	December 6
Lyon	H. H. Woodson	Eddyville	December 5
McCracken	Leon Higdon	Paducah	December 27
McCreary	R. M. Smith	Stearns	December 4
McLean	F. L. Johnson	Livermore	December 14
Madison	Charles J. Grubin	Richmond	December 21
Magoffin	Lloyd M. Hall	Salyersville	

COUNTY	SECRETARY	RESIDENCE	DATE
Marion	Nelson D. Widmer	Lebanon	December 26
Marshall	S. L. Henson	Benton	December 20
Mason	J. A. Campbell, Act. Sec.	Maysville	December 13
Menifee			
Mercer	J. Tom Price	Harrodsburg	December 12
Metcalfe	E. S. Dunham	Edmonton	December 5
Monroe	Corinne Bushong	Tompkinsville	
Montgomery	D. H. Bush	Mt. Sterling	December 12
Muhlenberg	E. L. Gates	Greenville	December 12
Nelson	W. Keith Crume	Bardstown	December 20
Nicholas	T. P. Scott	Carlisle	December 18
Ohio	Oscar Allen	McHenry	December 6
Owen	K. S. McBee	Owenton	December 7
Owsley	W. H. Gibson	Booneville	December 4
Perry	J. P. Boggs	Hazard	December 11
Pike	S. B. Caseholt	Pikeville	December 7
Powell	I. W. Johnson	Stanton	December 4
Pulaski	Roht. G. Richardson	Somerset	December 14
Robertson	L. T. Lanham	Mt. Olivet	
Rockcastle	Roht. G. Webb	Livingston	December 1
Rowan	I. M. Garred	Morehead	December 11
Russell	J. R. Popplewell	Jamestown	December 11
Scott	H. V. Johnson	Georgetown	December 7
Shelby	C. C. Risk	Shelbyville	December 21
Simpson	N. C. Witt	Franklin	December 12
Spencer			
Taylor	L. S. Hall	Campbellsville	December 7
Todd	B. E. Boone, Jr.	Elkton	December 6
Trigg	Elias Futrell	Cadiz	
Union	E. Bruce Underwood	Morganfield	December 5
Warren-Edmonson	Paul Q. Peterson	Bowling Green	December 13
Washington	J. H. Hopper	Willisburg	December 10
Wayne	Mack Roberts	Monticello	
Webster	C. M. Smith	Dixon	December 29
Whitley	C. A. Moss	Williamsburg	
Wolfe	John L. Cox	Campton	December 4
Woodford	George H. Gregory	Versailles	December 7

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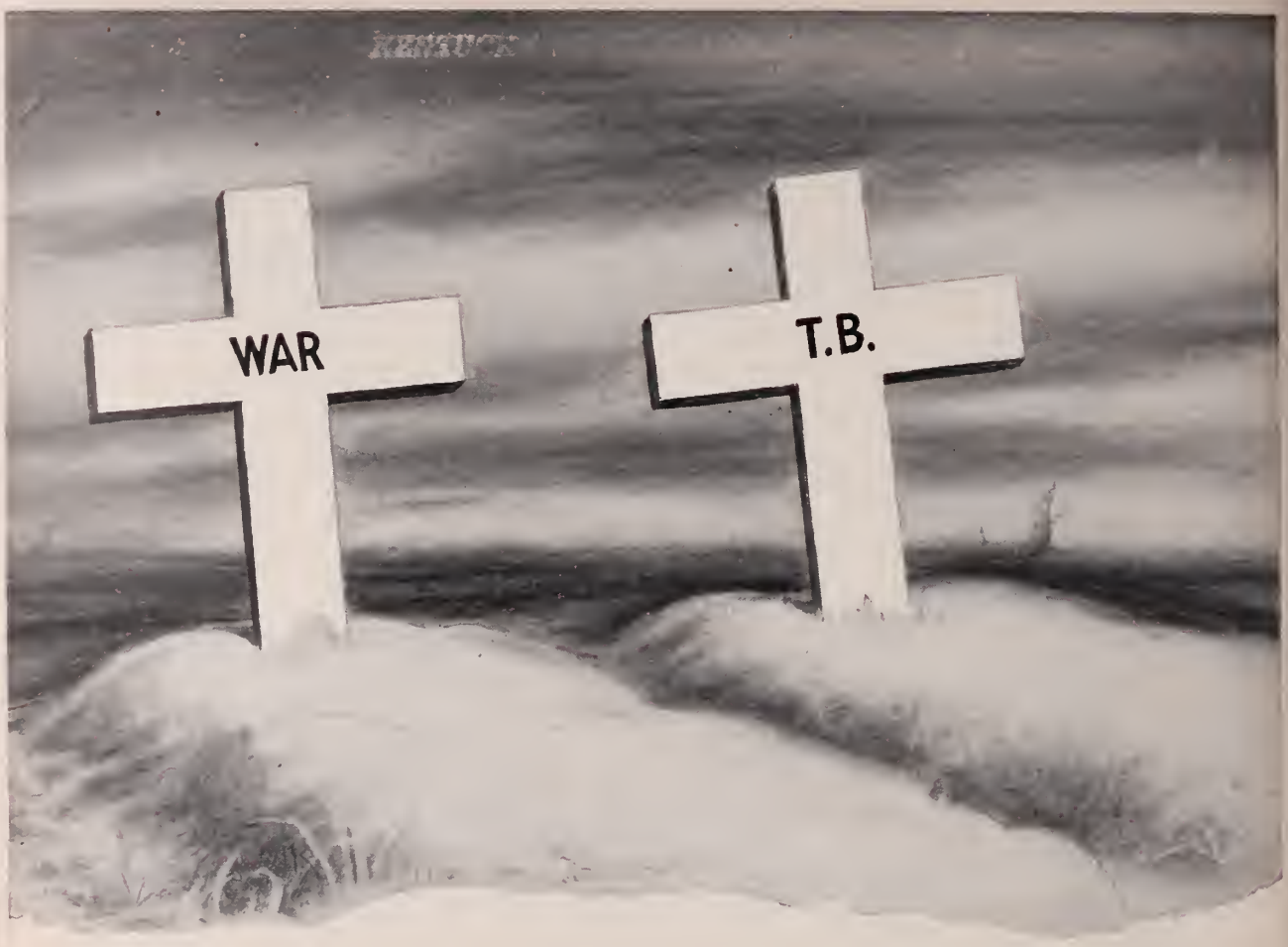
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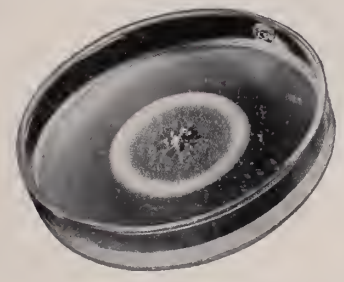
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KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

Published Under the Auspices of the Council

VOL. 42, NO. 12 BOWLING GREEN, KY. DECEMBER, 1944

ORGANIZATION TRENDS IN RELATION TO MEDICAL CARE

For more than a year the entire medical profession has been alertly aware of what is going on throughout the Nation in regard to the problems of adequate medical, dental, nursing, and hospital care for civilians suffering from ordinary and cataclysmic diseases. Admittedly there was good reason for consideration of these vital concerns of the people before the war, but, aside from the flare-up a decade ago, which resulted in the "Study of the Cost of Medical Care," and the original "Wagner Bill," it remained for World War II and the transition of approximately fifty thousand physicians from civilian to military service to accentuate the public and professional attitudes toward these very important social demands. New legislation, sponsored by individuals and groups cooperating with Senator Wagner, has been on the Congressional roster for a year or more and the subject of public and private debate without any punches being pulled in the acceptance of the challenge. Organized medicine, with the support of the American Bar Association and many other groups involving both professional and industrial interests, has pointed out the inherent dangers of the proposed federalization of medicine, both as it affects individual rights in the choice of health and healing services and its potential influence upon the progress of medical science. The American Medical Association has never, until within the last year, agreed that it should have a representative agency in Washington to serve as a source of information to the states' representatives in Congress and to watch the trend of events in relation to public health and medical care, for the reason that such a step might be misconstrued as an effort to influence legislation politically or selfishly. When, however, it seemed that there were movements tending toward regimentation of all the allied services contributing to the protection of the public health, its policy forming and organization determining agency, the House of Delegates representing all states and territories, resolved that conditions now demanded that the medical profession should have in Washington an office with experienced representatives to watch trends and to be available for reliable information to members of Congress in relation to the resources of American medicine when problems of health and medical care are to be considered.

It follows, therefore, that since our National organization has initiated this program, it must have the wholehearted support and influence of the constituent State societies. To bring this about, the American Medical Association is sponsoring conferences of officials and Committee Chairmen of State organizations in "Service Command" areas. The first of these conferences, held in Cincinnati, Ohio, on October 29th, was participated in by physicians from Kentucky, Indiana, Ohio, and West Virginia. Keynote addresses were made by the Washington representative of the American Medical Association, Doctor Joseph Lawrence; Doctor Edward J. McCormick of Ohio, who presided; and trustees of the American Medical Association, including Doctor E. L. Henderson of Louisville. All representatives from the four states were given opportunity to express their views. Kentucky was ably represented by our President, Doctor O. O. Miller; Doctor C. A. Vance, Chairman of the Council; both of our delegates to the American Medical Association, Doctor J. B. Lukins and Doctor Clark Bailey; four other representatives of the Council; Doctor Irvin Abell, Chairman of the Public Relations Committee, and other officers and members of the State Association. Corresponding "Service Command" conferences will be held throughout the United States.

Our President, Doctor Miller; Doctor Abell, Chairman of the Public Relations

Committee; Doctor Vance, Chairman of the Council; Doctor Henderson, Trustee of the American Medical Association; and our delegates to the American Medical Association, Doctors Lukins and Bailey, have agreed that the Kentucky State Medical Association should make plans for some action preparatory to participation in the overall program of American medicine, as it relates to the program of medical care. Within the next few weeks, a meeting of the Council will be held at State headquarters, and all officers of the Association, with representatives of local Public Relations Committees, and Kentucky Chairmen of Standing Reference Committees, will be expected to attend.

For the information of members of the Association, attention is called to various official and news reports appearing in the Journal of the American Medical Association in the last year; the publications of the National Physicians Committee; and the Hearings before a Subcommittee of the Committee on Education and Labor, United States Senate, as published in Section V of that Committee's Report. This last publication may be secured by request to your Congressman or Senator. WATCH THE TRENDS!

TRIBUTE TO
PHILIP FOSTER BARBOUR, M.D.

"Sunset and evening star,
And one clear call for me!
And may there be no moaning of the bar,
When I put out to sea."

Thus spoke Philip F. Barbour as we attended the funeral of the late Adolph Pfingst. When on November 1, 1944, I learned that Dr. Barbour had just passed away, there came to my mind that familiar verse which he had often quoted: "Honor thy father and mother that thy days may be long in the land." Certainly during the 76 years of his life he had seen much, heard much, and accomplished a great deal. He led a full and abundant life, fifty-four years in the practice of medicine is a long, long time.

He was graduated in 1890 from the Hospital of Medicine. Dr. P. "Dick" Taylor, a member of the Faculty and later Dean of the College, told me that Dr. Barbour was the most brilliant and versatile student he had ever known. He received his



PHILIP F. BARBOUR, M. D.

B.A. degree from Central University, later Centre College, and had practically completed his work for his Master degree when he suddenly decided to start in medicine at once. He had long ago decided to take up medicine, although some one had said that he was torn between two desires, the ministry and medicine. This, I am sure was not true. He always expressed a desire for medicine in his boyhood days. As he expressed it: "I felt a definite call to medicine." While a senior in medical school he taught physiology and chemistry to the undergraduates, and upon graduation, with honors, he received offers with a large salary from other states. These he declined and took up an internship at the City Hospital. He entered into private practice soon after and became deeply interested in the diseases of childhood. He was particularly distressed at the mortality due to diarrheal disorders. This was a definite factor in leading him to pediatrics.

He took postgraduate work in Vienna, Berlin, and London. He spent considerable time in the Great Ormond Street Hospital for Sick Children, where he met Dr. George Still, Professor of Pediatrics,

King's College, London, and physician in chief to the Ormond Street Hospital. They became fast friends and I recall one occasion when Dr. Still, who was the author of a book, "Common Disorders and Diseases of Childhood," presented Dr. Barbour with a volume and on the flyleaf of which he wrote these words: "To my good friend, Philip Barbour, from George Still."

In many years of association with Dr. Barbour I learned to admire, respect, and love him. He was my Professor of Pediatrics at the University and later on we were office associates. It was also my pleasure to have been associated with him in the Department of Pediatrics of the University of Louisville, of which Department Dr. Barbour was the head for thirty-five years.

He was a great teacher and there were no vacant seats when he lectured. He expected and demanded the attention of the students. On more than one occasion I have heard him say to some unfortunate "cut-up," "I will excuse you," as he pointed to the door. He had the faculty of bringing out the best in the students. He was thoroughly kind and sympathetic and was always wise and helpful. More than one fellow on the brink of failing later passed with credit because Dr. Barbour had given him several hours of free tutoring. He often had a quick, abrupt approach, but under this was a heart of gold.

Great as he was a teacher, he rose to even greater heights as a private physician, quick to grasp details and make deductions, quick, but thorough in his examination of a patient he often startled me with his accurate diagnosis and sound advice. He gave of his time and talent unstintedly to all alike, rich and poor. No worthy calls were turned down and I ought to know as many of these fell to my lot in my earlier days.

Busy as he was he found time to be a great churchman. He was President of the Kentucky Association of Christian Physicians, which met formerly every Sunday previous to the State Medical Association's annual meeting and held union services at some centrally located church. One of the most outstanding meetings of this Association was the time Dr. Howard Kelly was the speaker. For years he conducted a Sunday School class at the Second Presbyterian Church for medical students. The boys came the first time to see what it was all about and continued to attend because they knew what it was all about. He was a great churchman in the broadest sense. A staunch and true Presbyterian, he attended all services and supported its institutions, and what is more remarkable he aided and supported other denominations without favor, the Protestant, Catholic, and Jewish, and yes, even the Negroes.

A civic leader of vision, a Rotarian of distinction, an organizer and booster of all movements for child health, Dr. Barbour in conjunction with Dr. Gavin Fulton and Dr. Ap. Morgan Vance, did more to perpetuate the Children's Free Hospital than all of us later fellows. He was very active in behalf of the Crippled Children's Commission and a member of the Active Staff of the Kosair Crippled Children's Hospital. It was he who advocated and promoted so effectively postgraduate courses once a year at the Children's Free Hospital. In 1932 when he became president of the Kentucky State Medical Association he instituted postgraduate courses throughout the State. They proved tremendously popular and valuable. At the time of his death he had plans for helping the colored physicians and children which will be carried out as he had arranged.

Dr. Barbour was one of the first four men who limited his practice to pediatrics. He was internationally known and held many high places of honor related to pediatrics, such as in the Southern Medical Association and the American Medical Association.

Dr. Barbour believed in clean living, he did not smoke or drink. He also believed in keeping physically fit. He was an excellent golfer and a good bowler. His last few years were as Consultant in Pediatrics to the State Department of Health. He greatly loved this work and was very happy in it. Some weeks ago in referring to the State Department of Health personally, he said: "What a pity that I won't have a longer time to spend with this fine group of people."

In his passing we have lost a great friend, the University a great teacher, and the Commonwealth of Kentucky a true physician. I know I voice the sentiments of those people who knew him, and they were legion, when I say I am the better for having known him. We shall not soon see or know one like him.

James A. Pritchett, M.D.

FREDERICK G. SPEIDEL, M. D.



Dr. Frederick G. Speidel, after twenty-five years of devoted service to the people of Louisville, died suddenly at his home Sunday, October 15, 1944.

He was the son of the beloved Dr. Edward Speidel who for many years was Professor of Obstetrics at the University of Louisville.

He received his M.D. from the University of Louisville Medical School in 1917 and served as Lieutenant in the Medical Corps of the U. S. Navy until the end of World War No. I. He was a post graduate pupil at the U. S. Naval Medical School, Rockefeller Institute for Medical Research and University of Michigan. Throughout his professional life he was known as a physician of unusual ability with a keen insight of the many problems of modern medicine. He was Associate Clinical Professor of Pharmacology at the University of Louisville, and served there in other teaching capacities.

His Oration in Medicine was one of the best papers read before the Association in Lexington. At his death, as an eloquent testimonial to his services, the following editorial, "Liberalism in Medicine Loses An Advocate," appeared in the *Courier-Journal.*

"The unexpected death of Frederick G. Speidel is a shock and a loss to the medical profession in Louisville and to all in the community, and they were many, who were friends of this notable, kind, modest, and able physician. Doubtless he fell victim to the hard and unremitting pace which wartime conditions have imposed upon all of our doctors, whose strength is being strained to the utmost by the disparity between their numbers and the calls upon their time and skill. Dr. Speidel evidently wore himself out in this service and at an age when many years of usefulness were apparently ahead of him —years which promised special usefulness because of his enlightened view of the obligations of his profession in democracy. His oration, "Conservatism and Liberalism in Medicine," read at the meeting of the Kentucky State Medical Association in Lexington less than a month ago, remains an eloquent testimonial of how sane and thoughtful a man the cause of liberalism has lost."

CURRENT COMMENTS

The Chicago Medical Society is holding its Second Annual Clinical Conference at the Palmer House, Chicago, on February 27-28 and March 1, 1945. The sponsoring of this annual clinical conference for physicians of the Middle West has become an important function of the Chicago Medical Society following its inauguration last spring.

Chicago is a great medical center, probably one of the world's greatest, with abundant clinical material and clinicians of national reputation. The program presented at the first conference last spring, was enthusiastically received by the several thousand physicians who attended. The Committee is already under way in securing speakers on important subjects for the 1945 conference. Exhibits, both technical and scientific, will be greatly increased.

Further information will be given later. In the meantime, early reservations at the Palmer House, Chicago, are recommended.

The advertisement on Page xxxii in this issue Journal, contains a complete summary of the topics to be discussed and the speakers.

Capt. Hershell B. Murray, formerly of West Liberty, Kentucky, recently received a letter of commendation from Brig. Gen. Elmer Yeager for his exemplary work performed by his field hospital unit in the South Pacific war zone. The letter of commendation read, in part, "Please express to the officers, nurses, and enlisted men of the 5th Field Hospital my regards and appreciation of the manner in which this unit functioned since entering this base. During the period July 13 to August 3, 1944, under adverse conditions, the hospital was constructed and operated. A great many more patients than normal for such a unit received the best possible care. It is the opinion of the surgeon of the headquarters that the entire operation was the finest done by any hospital seen in this theater. Such performance reflects the highest type training, morale, and discipline." Dr. Murray graduated from the University of Louisville School of Medicine in 1932 and entered the service September 13, 1942.

OFFICIAL ANNOUNCEMENTS

MINUTES OF THE NINETY-FOURTH ANNUAL SCIENTIFIC SESSION OF THE KENTUCKY STATE MEDICAL ASSOCIATION HELD AT LEXINGTON, SEPTEMBER 18-20, 1944

Tuesday Morning, September 19

The opening session of the Ninety-Fourth Annual Meeting of the Kentucky State Medical Association, a Wartime Graduate Medical Meeting designated as the Benjamin Rush Palmer Memorial Meeting, and held in the Phoenix Hotel, Lexington, September 18-20, 1944, was called to order at 9:15 a. m., James H. Pritchett, Louisville, President of the Association, presiding.

President Pritchett: The Ninety-Fourth Session of the Kentucky State Medical Association is now in order. Will you please stand for the invocation by the Reverend Dr. Miles.

Reverend Dr. Robert Miles (Pastor, First Presbyterian Church): O God, our Gracious Heavenly Father, we thank Thee for this new day. We invoke Thy blessing upon this gathering of Thy servants. We are grateful for the ministry of healing in this world, and we ask Thy blessing upon these men in their work for the alleviation of the suffering of mankind and as they plan for the prevention of suffering in days to come.

We are thinking today of our country and those who lead our armies and our destinies. Give them judgment and discretion, we pray. Bring victory to our arms, and that right speedily, that we may, in turn, deal Thy peace and Thy way among mankind.

Bless each man individually, his work, his family, and may we all be brought into true brotherhood, both here and throughout this world. And this we ask in Thy name. Amen.

President Pritchett: We shall now have greetings from Dr. Sam Marks, Lexington.

Address of Welcome

Samuel B. Marks, Lexington: It is with great honor and pleasure that the Fayette County Medical Society again greets and welcomes the Kentucky State Medical Association. We do so with a certain feeling of humility. All our good horses now race at Louisville for the duration; all our good whiskey is gone, for goodness knows, how long, but I hope you will find our ladies attractive. Don't take me too seriously and agree too much with Bobbie Burns when he said:

A man may drink, and no be drunk:
A man may fight, and no be slain:
And man may kiss a bonie lass,
And ay be welcome back again!

I would like to welcome, first, the old-timers, those men who have served so well over the years, in both our scientific and executive sessions, and who have meant so much to this Association. Now has come a time when they thought they would spend most of their time fishing and in contemplation, but they have been compelled to assume tremendous additional burdens and to join those younger men whom General Hershey and his many committees have deemed essential for the proper medical care of the people of our state.

We do greet most generously our distinguished guests, both military and civilian, who have come at probable great inconvenience to present our most excellent and unusual scientific program. This fact is what makes us so expectant and gives us that feeling of absolute lack of care.

Now I would like to greet (and will you join me) those of us who serve in the faroff places, and wish them Godspeed. (Applause).

President Pritchett: Before the next order of business, may I invite your attention to the really fine exhibits on the mezzanine floor and request that, at your leisure, you visit them and spend some time there. It will be well worth your while.

Next on the program is the installation of the new President. It gives me great satisfaction and pride and personal pleasure to install the President Elect, Oscar O. Miller, for several reasons.

Principally, however, because of the fact that we have long been friends; we were classmates and fraternity brothers, and I recall that not too many years ago we came up to the University together, unknown to each other, and in our sophomore years those of the better students —and how we qualified I do not know— were given what were called classes in osteology and dissection. In those days we dissected at night-time. There was a tall, angular guy with a handle-bar mus-

teche—didn't you have one, Oscar? and a derby hat next to me. I had a tall Texas boy as a freshman under my tutelage in my sophomore year, and he pointed to Dr. Miller at the next table and said, "I want to get cutting. These guys are way ahead of us."

I looked over to Dr. Miller and he was two weeks ahead, proceeding according to schedule. When the dissection hours were over, I took him aside and said, "How come you fellows are so far ahead?"

He looked at me and said, "Well, we're here to get ahead, aren't we?"

That is the type of man we need next year. We are here to get ahead. It is going to be a fast pace. As I remarked yesterday before the House of Delegates, as I yield this gavel to my friend Miller I assure you that I shall not take a back seat but shall be around in any way I can to help him out.

Dr. Miller, with this badge I install you as President of the Kentucky State Medical Association, and it is my pleasure. Good luck to you. (Applause).

Oscar O. Miller, Louisville: I want to assure you that this is a great honor. I appreciate the type of men I am following and I know the kind of pace they have set. I want to assure you that I will serve you within the range of my abilities and as faithfully as I can.

Before we proceed to the scientific program, I would like to recognize one of the deans of the profession, a man who represents the finest traditions in medicine, and one who has made a splendid contribution to this Association. He was Treasurer for twenty-six years and President in 1928. Dr. W. B. McClure, will you please stand? (Applause)

I realize that there are many other members, physicians and surgeons here, who should be recognized, but I could not miss that opportunity.

Next we will have the report of the Committee on Arrangements, Dr. E. S. Maxwell, Chairman.

Report of Committee on Arrangements

Elmer S. Maxwell, Lexington: I want to call your attention to one or two of the things that are announced in the program. At noon today, the State Association entertains the Woman's Auxiliary in this hotel with a luncheon. This afternoon, immediately following the scientific program, the Fayette County Medical Society entertains with cocktails in the Fireside Room on the first floor. This evening at the United State Public Health Service Hospital, through the kindness of Dr. J. D. Reichard, we are to have a dinner. This is not a subscription dinner. We urge that all of the physicians who have cars use them in taking as many as they can, and those who do not have transportation will have transportation by the local committee headed by Dr. J. Farra Van Meter.

The Golf Committee, in charge of Dr. T. J. Overstreet, has arranged a number of tournaments with prizes, at the Lexington Country Club

The cocktail party that I mentioned is in charge of Dr. W. D. Reddish, Chairman of Entertainment.

Mrs. Farra Van Meter is the local head of the Entertainment Committee for the Woman's Auxiliary. They have had to make certain changes in their program.

We hope everyone has a good time, and any member of the Fayette County Medical Society is at your service, so command us. (Applause.)

The following papers were presented:

Chemotherapeutics in Pediatrics, by John A. Toomey, Cleveland.

At the request of the President, Dr. Toomey also presented a talk on Poliomyelitis.

Chemotherapy (Penicillin), (a) Civilian Medical Aspect, by Donald G. Anderson, Boston; (b) Symposium on Military Aspects: Medical, by Brig. Gen. Hugh Morgan, Washington, D. C.; Surgical, by Col. B. N. Carter, Washington, D. C.; Venereal Disease Treatment by Lt. Col. Thomas Sternberg, Washington, D. C.

The Oration in Medicine, "Conservatism and Liberalism in Medicine," was given as a special order of business at twelve noon, by Frederick G. Speidel, Louisville.

The meeting recessed at 12:45 p. m.

Tuesday Afternoon, September 19

The meeting was called to order at 2:00 p. m. by President Miller.

The following papers were presented:

Psychosomatic Medicine, by Maurice Levine, Cincinnati.

Present Status of Industrial Medicine, by Col. Anthony Lanza, Washington, D. C.

Current Problems in Aviation Medicine, by Maj. Gen. David N. W. Grant, Washington, D. C.

The Present Status of Pain Relief in Labor, by Frederick H. Falls, Chicago.

Cardiovascular Diseases, by William D. Stroud, Philadelphia.

The meeting recessed at 5:00 p. m.

Annual Dinner

Tuesday Evening, September 19

The Annual Dinner was held at the United States Public Health Service Hospital, following which there were addresses by the President, Oscar O. Miller, Louisville, on "Some Aspects of the Tuberculosis Problem"; Roger I. Lee, Boston, President-Elect of the American Medical Association, on "Accelerated Medicine Today and Tomorrow"; and Edward H. Cary, Dallas, representative of the National Physicians' Committee, on "The Medical Profession and Federal Legislation."

Elmer Henderson, Louisville, member of the Board of Trustees of the American Medical Association, presided during the meeting, which adjourned at 9:30 p. m.

Wednesday Morning, September 20

The meeting convened at 9:40 a. m., President Miller presiding.

The following papers were read:

Symposium on Tropical Diseases: Epidemiology, by R. E. Dyer, Assistant Surgeon General U. S. Public Health Service, Washington, D. C.; Medical Aspects of Tropical Diseases, by Capt. Alphonse McMahon, Chief of Medicine, U. S. Naval Hospital, Bethesda, Md.; The New Weapons of Control of Insect-Borne Diseases, Brig. Gen. James S. Simmons, Washington, D. C.

The Surgical Aspects of Chronic Dyspepsias, by Irvil Abell, Louisville.

The Oration in Surgery, "Hazards Related to Thyroid Surgery," was presented by J. Farra Van Meter, Lexington, as a special order of business at twelve noon.

The President-Elect, J. Watts Stovall, Grayson, was introduced by the President.

The meeting recessed at 12:20 p. m.

Wednesday Afternoon, September 20

The meeting convened at 2:15 p. m., President Miller presiding.

Upon motion of Samuel B. Marks, Lexington, a moment of silence was observed in tribute to members in the armed services who had made the supreme sacrifice.

The following papers were read:

Arthritis, by Ralph Pemberton, Philadelphia.

Nutrition: Its Relation to Deficiency Diseases, by Col. John D. Youmans, Washinton, D. C.

Upon invitation of the President, Roger I. Lee, President-Elect, American Medical Association, spoke on the future of the returning medical officers.

An expression of appreciation was extended to L. E. Smith, Executive Secretary of the Kentucky Tuberculosis Association, who had loaned and operated his lantern and screen for the presentation of slides during the sessions.

The meeting adjourned at 4:25 p. m.

MINUTES OF THE NINETY-FOURTH ANNUAL SESSION OF THE HOUSE OF DELEGATES OF THE KENTUCKY STATE MEDICAL ASSOCIATION HELD AT LEXINGTON, SEPTEMBER 18-20, 1944

Monday Morning, September 18, 1944

The first meeting of the House of Delegates of the Kentucky State Medical Association, held during the Ninety-Fourth Annual Session, September 18-20, 1944, at the Phoenix Hotel, Lexington, convened at 10:15 a. m., the President, James H. Pritchett, Louisville, presiding.

President Pritchett: Gentlemen, the meeting will come to order, we will have the report of the Committee on Credentials, Dr. Johnson.

H. V. Johnson, Georgetown: The Committee on Credentials met this morning, went over the list of Delegates, and found everything in perfect order.

President Pritchett: Report of the Committee on Scientific Work, Dr. Miller.

Report of Committee on Scientific Work

Oscar O. Miller, Louisville: Your Committee went over the current literature, as appearing in the national journals, and selected from those publications topics that we thought might be of interest to the Association. Then, in conjunction with Dr. C. W. Dowden, who represented the American College of Physicians, and Dr. E. L. Henderson, who represented the Postgraduate Course of the Fifth Corps Area, and Dr. Irvin Abell, representing the American College of Surgeons, and Dr. J. H. Pritchett, the President, we arranged for the speakers for this occasion, who were contacted through the efforts of Dr. Henderson. We also had a meeting in Chicago and completed the program. I think, as you review it, you will find that this will truly

be a post-graduate course for the profession in Kentucky.

PRESIDENT PRITCHETT: I think you will probably agree from the program itself that it is one of the best we have ever had.

We omitted the roll call on purpose, hoping that more would come in later. We will have it at this time, Mr. Secretary.

The Secretary, P. E. Blackerby, Louisville, called the roll.

SECRETARY BLACKERBY: We have a quorum of those who are registered.

PRESIDENT PRITCHETT: Next on the program is the reading of the minutes of the 1943 meeting. Dr. S. C. Smith of Ashland moves the reading be omitted, unless there is a very urgent demand for it. Do I hear a second? They have been published in the Journal.

The motion to dispense with the reading of the minutes of the 1943 meeting was seconded by Ernest Bradley, Lexington, and carried unanimously.

PRESIDENT PRITCHETT: Report of the Committee on Arrangements, Dr. Cawood.

REPORT OF COMMITTEE ON ARRANGEMENTS

CHARLES D. CAWOOD, Lexington: The Fayette County Medical Society appointed the various committees which are published in full in the program.

The Phoenix Hotel is the headquarters for the Association meeting and the Lafayette Hotel for the Woman's Auxiliary.

The Reception Committee will be glad to help in the transportation of members and guests to and from the Public Health Service Hospital Tuesday evening.

The Finance Committee has collected sufficient funds to give a little entertainment from 4:30 to 5:30 at the Phoenix Hotel, prior to the dinner at the Public Health Service Hospital.

The Golf Committee has arranged for a tournament with very beautiful trophies, at the Lexington Country Club.

I would like to commend Dr. Charles Vance, a member of the Fayette County Medical Society and Councilor of the Tenth District, for his untiring assistance to the various local committees in preparing for this meeting.

On behalf of the Fayette County Medical Society, I wish to say that we are greatly honored to have this meeting in Lexington. I desire to assure you that not only do the chairmen of the various committees wish to serve you while you are here, but every single member of our Society desires to take part in making your visit a pleasant one.

PRESIDENT PRITCHETT: Thank you, Dr. Cawood. We assure you it is a real pleasure to be here.

At this time, if it is agreeable, the Woman's Auxiliary will make their report, Mrs. Dulaney.

REPORT OF THE WOMAN'S AUXILIARY

MRS. OCTAVUS DULANEY, Louisville: This is the report of the President of the Woman's Auxiliary to the House of Delegates of the Kentucky State Medical Association.

The members of the Woman's Auxiliary to the Kentucky State Medical Association send you cordial greetings through their President. I have the honor to submit the following summary of our year's work.

One new Auxiliary has been organized.

In addition to our usual activities, plus participation in all branches of the work of Red Cross, Medical and Surgical Relief Committee of America, the Russian War Relief, the Women's Field Army for the Control of Cancer, and helping in our husbands' offices, our main effort this year has been devoted to familiarizing ourselves with the Wagner-Murray-Dingell Bill, in order that we could discuss and fight it intelligently. Doctors all over the state have given generously of their time, speaking against the bill before various groups.

We have contributed what we could toward the eradication of tuberculosis. Two of our members are on the Board of the State Tuberculosis Association and several members are active on the boards of their local associations. All of the counties participated in the sale of TB seals. Marshall County voted to equip and make more comfortable the portable cabin of the county that is used for tuberculosis patients.

Subscriptions for both Hygeia and the Bulletin of the Woman's Auxiliary to the American Medical Association have been solicited.

Before leaving office, Governor Keen Johnson issued a proclamation naming December 13 as Jane Todd Crawford Day. A statewide observance was held in churches, clubs and schools, as well as medical auxiliaries. The four Louisville radio stations granted time to have their announcers read the Jane Todd Crawford Proclamation.

Our Doctor's Day observance this year honored Dr. J. N. McCormack and his

son, Dr. Arthur McCormack. Station WAVE broadcast a 15-minute program on April 13 depicting scenes from their lives. This sketch was written by Mrs. Joseph C. Wier, Radio Chairman. Most of the counties had programs commemorating Doctor's Day. Madison County in particular had a very beautiful memorial program at Boone Tavern in Berea. In addition to a talk outlining the lives of the father and son, Dr. J. N. and Dr. Arthur McCormack, several poems honoring medical heroes of the past and present were read. Individual members of the Jefferson County Auxiliary contributed to a fund to be used to plant native dogwood and redbud trees on the lawn of the new Arthur Thomas McCormack Building at the Hazelwood Sanatorium.

The Chairman of Public Relations, Mrs. John G. South, put on Health Institutes in many towns and cities of the state. The programs at these Institutes covered many questions of health education and community sanitation. All organizations, both civic and religious, cooperated in making these meetings a success.

The newspapers, considering the various shortages, have been more than generous in granting us publicity.

The funds from our magazine, the *Quarterly,* which has been discontinued for the present, have been invested in War Bonds. Jefferson County Auxiliary, which had a sizable savings account for the Benevolent Fund, also put that money into War Bonds. All counties reported they have stressed War Bond purchase.

PRESIDENT PRITCHETT: Thank you very much for this interesting, fine report.

Upon motion regularly made, seconded and carried, a rising vote of thanks was extended to the Woman's Auxiliary for the report.

PRESIDENT PRITCHETT: Mrs. Offutt, won't you say a word to us, please? Mrs. Offutt is the President-Elect of the Woman's Auxiliary.

MRS. ELEANOR HUME OFFUTT, Frankfort: This is a very unexpected pleasure. Mrs. Dulaney has very eloquently told you of the work of the Auxiliary, and I believe in performances and not in promises, but it is my hope to do as much as possible in this war-torn time when all organizations must be subservient to the one effort of winning the war and the peace.

If any of you know my medical background you must know that no woman in Kentucky could have the interest of this organization more at heart than I. Not only my father but my two uncles were doctors. Some of you may have seen the book that by brother published, the work of his love, because his labors, as you know, are in the Army, and it was dedicated to six doctors of his name, the Hume line. So you can see that far back we were medical-minded.

I would say one thing if the women were here, but they are not, and I am going to say it to you because you are here, and that is that I hope that your daughters will be interested in this organization. I want every woman whose father is a doctor to remember that fact always. It is the greatest heritage that any woman can receive. I consider it the greatest heritage that I could have. Nothing that I could ever do in my lifetime would even faintly recompense my father for his labor of love for me and for mankind, and it gives me great pleasure to look into your faces today, because I always feel when I look on a group of doctors that I know they are doctors; there is a look in your eyes of seeing beyond the surface, of knowing what is in the heart and in the mind and in the body, and I think that the work you are doing is the finest work that God ever gave to man.

I am glad that your mission is a mission of healing and not of killing, that you will never have to look into the faces of your children and grandchildren and apologize for what you may have done. (Applause)

SECRETARY BLACKERBY: For the information of some of you who may not know the circumstances, Mrs. Offutt is the sister of Brigadier General Edgar Hume, who distinguished himself both in the last war and in this war.

PRESIDENT PRITCHETT: Next on the program, is the President's report. I have no formal written report. I feel much like the little boy in the story, you remember, who was helping his father in the barnyard. He had a calf tethered to a long rope. The calf was cutting up something terrible, and the farmer said, "Son, head that calf."

The little fellow grabbed the rope. The calf struck out across the barnyard, dragging the boy through the muck and the mire and the manure.

Directly the farmer said, "Son, did you stop that calf?" He said, "No, but I slowed him down."

I can't tell you of any great achieve-

ment that I have accomplished. My mission has been one rather to carry on where our two dear departed friends, Drs. Turner and Stilley, left off, and that has been for the perpetuance of the tuberculosis program. I have had something to do with that, and I tell you it is a great honor to be so connected. It has not been feasible or possible, except in a very limited way, to visit the various county organizations and societies, much as I would love to have done so. You have been terribly busy and so have we. Times have changed. For that reason, perhaps, for the last year or two years, these visits have been few and far between, and probably will continue to be for the next year or two.

I do want to thank the members of the Council, Dr. Vance especially, our efficient Chairman all these years, for the really tremendous amount of work they have done in the various districts. Unless you have been, as I have been, privileged in the last two or three meetings to sit in on their deliberations, you have little idea, unless you have been a Councilor yourself in the past, of the tremendous scope of work they are doing. They are busy men, like you and myself, yet when they are called to serve at the various meetings they are there a hundred per cent, giving of their valuable time. Likewise, you men as Delegates have been most unselfish in your devotion to your medical duty, lending your support in behalf of the State Medical Association.

When I tomorrow step down and yield the gavel to my successor, I do not expect to take a back seat; rather I expect to be a blocking halfback, no longer carrying the ball. I think I can make good interference. I am a year older, I know; and I think I am a little wiser than I was a year ago, and certainly I can see the problems from a better angle than I could have done without having been your President these past few months. There is much work to be done yet, and I do hope that sometime in the near future I can come down to your county and your organization, because you live in the best town in the state—you do; I think I do—and have a quiet talk with you and tell you how much we appreciate your work and what a valuable asset you have been, and talk things over. (Applause)

Next on the program is the report of the Council, Dr. Vance.

Report of the Council

C. A. Vance, Lexington: This is the report of the Council that was prepared at the last meeting of the Council at Louisville about the first of September or the last of August. All were there except one or two, and we had a very full discussion of everything.

In the matter of elected leadership in the Kentucky State Medical Association, it seems that the specter of death has been hovering over the organization during the wartime period. At the Annual Meeting of the House of Delegates in 1943, it became necessary to elect a successor to the then President-Elect, Dr. C. C. Turner, who died February 28 of that year, and a Secretary to succeed Dr. McCormack, who died on August 7, 1943, the latter having served the Association for thirty-six years. Dr. Van A. Stilley was elected to fill the unexpired term of Doctor Turner and this beloved leader passed to his reward January 20, 1944, leaving vacant the office of President to which he had succeeded and necessitating action by the Council in electing his successor. On January 28, 1944, the Council met at the call of the Chairman, Dr. C. A. Vance, and elected Dr. James H. Pritchett of Louisville to fill out the unexpired term of Doctor Stilley.

Dr. Pritchett has, pursuant to his election and in fulfillment of his duties, officiated at all the affairs of the Association, having attended practically every meeting of the Council and the Committee on Scientific Programs. Dr. Pritchett had been elected Vice-President at the 1943 Annual Meeting, and it is the judgment of the Council that the Association is fortunate in having him succeed to the active leadership of its affairs.

The Council is recommending to the Committee on Resolutions that it present to the House of Delegates a suitable resolution in memory of Dr. Stilley, who had served so long as a Councilor of the State Medical Association and who was further honored in his election to the highest position within the gift of the Association.

Another honored member of the Kentucky State Medical Association and one of its most distinguished and aggressive leaders, Dr. Virgil E. Simpson, died suddenly on May 2, 1944, while addressing a nurses' meeting in the Henry Clay Hotel, Louisville. Dr. Simpson was giving an expression of his interest in safe-

guarding the public health, as well as the profession's welfare, when he died. He had been a member of the House of Delegates of the American Medical Association through a number of its annual sessions, and had represented the Kentucky State Medical Association on the Committee for Revision of the United States Pharmacopoeia. He will be remembered for his reports to the House of Delegates of the State Medical Association, which, each year, brought to the members the latest facts in regard to these revisions. He was jealous of the profession and its prerogatives and loyal in his service to the State Association. The Council would recommend a suitable resolution in memory of this worthy member of our profession.

Following the death of Dr. Simpson, the Council, at a succeeding meeting, elected Major W. B. Atkinson, one of its members, to serve as delegate to the American Medical Association for 1944. Major Atkinson has served on the Council since 1934 and has, throughout his medical career, been a constant attendant upon the state meetings and has contributed of his time and energy to further the interest of organized medicine in this state. The Council believes it has honored both Doctor Atkinson and the profession in this selection.

In the period since the adjournment of the House of Delegates, the Council has met four times, at the call of the Chairman, for official business. The first meeting was immediately following the adjournment of the House of Delegates, when official action was taken in authorizing the issuance of vouchers to cover the expenses of the 1943 Annual Meeting. At this same meeting, pursuant to the instructions from the House of Delegates, the Council appointed Doctor C. C. Howard, Glasgow; Doctor Clark Bailey, Harlan and Doctor Carl Norfleet, Somerset, as a Planning Committee to work with the State Health Commissioner in connection with the program for the development of tuberculosis hospitals in the state and in urging upon the General Assembly necessary legislation for the most adequate hospitalization program possible. The Council, at this meeting, also named Drs. J. Watts Stovall, Grayson; Paul Hall, Paintsville; and S. C. Smith, Ashland, for nomination to the Governor for appointment of one member from this list to membership on the State Board of Health to succeed Doctor Stovall, whose term expired December 31, 1943.

The Council met again on January 12, 1944, for the purpose of reviewing the action of the House of Delegates in connection with the payment of dues of men in the Armed Services. In pursuance to authority granted by the House of Delegates, the Council authorized the Secretary to notify each County Secretary to send in a list of the members for whom the Society would request funds from the State Association for the payment of dues and to arrange for such payments. At this meeting, the Council, in accordance with authority granted by the House of Delegates, also named Louisville as the place of the next Annual Meeting. The Council also directed Doctor J. B. Lukins, one of its members, to prepare the plan for the annual medal for the outstanding doctor in the profession and instructed the Secretary and Treasurer to arrange for the purchase of $5,000.00 in government bonds from the reserve in the hands of the Treasurer.

A called meeting of the Council was held January 28, 1944. Upon report from the Secretary that accommodations could not be secured in Louisville for the Annual Meeting, arrangements were made and approval given for the holding of the session at Lexington, where ample accommodations had been vouched for by the Fayette County Society. At this meeting the Council, in accordance with the Constitution and By-Laws, proceeded to the election of Doctor James H. Pritchett to succeed the late Doctor Van A. Stilley as President of the Association, as referred to in the first part of this report. At this meeting, the Council heard reports on bills pending in the State Legislature, taking cognizance of them with appropriate recommendations.

At the call of the Chairman, the Council met August 1, 1944, and after reviewing a statement from the Office of Defense Transportation regarding the canceling or postponement of conventions, agreed that, since the Annual Meeting of the Association would be conducted under the auspices of the Wartime Medical Programs Committee and would be devoted almost entirely to pertinent wartime scientific subjects, it would be in keeping with the purpose of national defense to go ahead with arrangements for the meeting.

The Council reviewed the financial status of the Association, as set forth in the report of the official auditor, and approved expenses incurred in the routine business of the Association and in the purchase of war bonds.

In keeping with the usual custom, the Council has ordered the publication in the Journal of the report of the public accountant, covering the audit of the accounts of the Secretary and Treasurer. The Council considers it of great importance that each member of the Association carefully read this accounting and familiarize himself with the affairs of the Association.

The total income of the Journal this year was $9,331.52 as contrasted with $8,615.68 last year and $7,888.58 the year before. The cost of the Journal was $7,203.28 as compared with $6,707.23 last year and $8,509.78 the year before.

The auditor's report for 1943 showed total assets of $22,319.56; the report for this year shows a total of $25,750.02, an increase of $3,430.46. In studying the membership dues, we find that there was a gain of $695.00 in 1944, as compared with the total for 1943. The income of the Journal shows an increase from its advertising of $715.84, the income in 1943 being $8,615.68, while that for 1944 shows a total of $9,331.52. It is also noted from the auditor's report that there was a saving of $277.60 in the printing costs of the Journal in 1944 over 1943, the cost for 1944 being $6,245.50, as against $6,552.50 in 1943. The sum total of the increase from advertising and the saving effected in the cost of printing is $992.84. Thus, when we add the savings from the Journal to the increase in membership dues, we have $1,687.84 over the previous year.

From the report of the public audit, it will be observed that the Association has provided a total of $1,700.00 to County Societies to cover state membership dues for 340 of the Association members now in the Armed Forces. This is distributed among 58 counties, and would indicate that a considerable majority of the service men have been taken care of by the State Association. Twelve County Societies have elected to pay the dues of their members in service, without calling upon the State Association for financial aid, and quite a number of members on Army duty have chosen to remit for their own dues.

The Council desires to call the attention of the members of the Association to its service flag, conspicuously displayed in the assembly hall where this meeting is held, and to commend the Secretary and his staff for their efforts in keeping the flag up-to-date in the matter of stars. There are now 508 blue stars and 6 gold stars. The gold stars represent the names of the following who have made the supreme sacrifice in devotion to their country: Drs. E. S. Allen, Jr., and Courtland Beeler, Louisville; John R. Brosheer, Middlesboro; Morton A. Cundiff, Somerset; Fred H. Greenwell, New Haven; and Walter O. McCammon, Springfield. It is recommended that the editor of the Journal, in one of the early issues following this meeting, publish a brief tribute to each of these gallant medical officers.

The Council would again recommend an appropriation for the work of the Committee on Public Relations and that it be fixed by the House of Delegates, at this annual session, at $500.00, which is a reduction of $250.00 over last year, and $700.00 less than had been authorized in previous years. Of the amount appropriated last year, no expenditures were made. Hence, any appropriation authorized may be deemed as needed only in the event of some unusual circumstances.

The Council last year called the attention of the House of Delegates to the fact that the publication of the Woman's Auxiliary Supplement has been discontinued and recommended that the usual amount of $500.00, as reserve fund for the Woman's Auxiliary, be reduced to $200.00, which was done by official action of the House. There being no evidence at this time that the Supplement will be renewed within the next year and in consideration of the needs of the Auxiliary, which will probably not exceed $200.00, the Council again recommends that this amount be made available. We are glad to report that none of the $200.00 appropriated last year has been expended.

As was the case last year, the Council would like to reiterate its stand in regard to the enforcement of the Medical Practice Act by quoting as follows from its report made to the House of Delegates at the meeting of the Association in 1942:

> **For eighteen years this Association has cooperated with the State Board of Health in the enforcement of laws for the protection of our people. During each of these years the House of Delegates has authorized the expenditure**

of a sum not to exceed $1,200 for this purpose. The Council recommends that this amount be appropriated for the next year. It has not been necessary to use any part of this appropriation for the past several years, but it is important that it be available in case an emergency should arise in which it might be needed. We wish to urge the county societies to bring to the immediate attention of the State Board of Health any practice of medicine by unregistered practitioners. Such information should be accompanied by the names of witnesses upon whom these people have practiced, as this expedites the necessary legal procedure.

At the last Annual Meeting, the House of Delegates authorized expenditures not to exceed $500.00 in support of the program of the Committee on Postgraduate Work and we are glad to commend the accomplishments of this Committee during the last year, which will be covered in the Report of the Committee at this Annual Meeting. Total disbursements for expenses incurred by the Committee is $66.25. The Committee collected $14.00 from sale of certificates, leaving the actual amount expended from the Association funds $52.25, or a gross balance unexpended $447.75. In consideration of the success of the Postgraduate Program and the response it has received from physicians in various sections of the state, the Council would again recommend that $500.00 be appropriated for the needs of the Committee next year.

The Council, at its last meeting, reviewed the Scientific Program for the 1944 Annual Meeting, and desires to commend the Committee on Scientific Programs and its collaborators and the Regional Committee of the Wartime Graduate Medical Meetings, and recommends to the House of Delegates that a resolution be passed expressing appreciation of the Association for the contribution made by the National Wartime Graduate Medical Meetings, under the sponsorship of the American Medical Association, the American College of Surgeons, and the American College of Physicians, and that the Executive Secretary of each of these organizations be sent a copy of the resolution.

The Council recommends that the House of Delegates adopt the plan for awarding a Distinguished Service Medal annually to the most outstanding member of the Kentucky State Medical Association, as drawn up by Dr. J. B. Lukins, Councilor from the Fifth District, and which was approved by the Council at its last meeting. This plan is reproduced as follows:

Subject: Distinguished Service Medal to be given by the Kentucky State Medical Association.

Medal to be awarded annually and merit to be established on the following points:

1. **Contribution to organized medicine.**
 Membership in county society.
 Attendance, county and state.
 Service on committees, office, etc.
2. **Individual medical service.**
3. **Community health education and civic betterment.**
4. **Medical research.**
5. **Medical teaching.**
6. **Active military service.**

Any one of these, or any part, or all of them may qualify the applicant.

Any member of the Kentucky State Medical Association is eligible to be nominated by any other member as an applicant for the medal. All of these nominations, with the reasons for the nomination, shall be sent to the Chairman of the Council. All names will be considered by the Council, sitting as a body, and three will be selected as being worthy; then at the State's meeting, these three names are to be submitted to the House of Delegates, and the reasons stated for their selection.

On the first ballot the member receiving the smallest number of votes shall be dropped, then a ballot taken for the other two, the decision of the House of Delegates to be final.

It is suggested that this be an annual affair, but if, in the judgment of the Council, it seems best to skip any one year, this may be done.

The House of Delegates, at its last meeting, authorized the purchase of a suitable plaque as a memorial to the Association's late Secretary, Dr. Arthur Thomas McCormack, to be placed in the State Board of Health Building, wherein is located the headquarters of the Kentucky State Medical Association. No official action has been taken in connection with this, and the Council can only report progress and call the attention of the House of Delegates to the fact that Dr. W. O. Bullock, Lexington, honored member of this Association and a lifelong personal friend of Dr. McCormack, has offered to make the plaque, and is, at the present time, working on it in his studio

in Lexington. When this is finished and has been officially accepted, the new annex of the State Board of Health Building will be dedicated and the memorial plaque given proper location therein.

At the last meeting of the House of Delegates, it was also recommended that the new State Tuberculosis Hospital at Hazelwood be dedicated to the memory of Dr. McCormack. The Council is also glad to report that, in the laying of the cornerstone of this new hospital, an inscription was placed thereon naming the hospital "The Arthur Thomas McCormack Memorial Hospital" and that the ceremonial exercises were devoted almost entirely to memorializing Dr. McCormack.

The Tuberculosis Planning Committee, authorized by the House of Delegates, appointed by the Council, and consisting of Drs. C. C. Howard, Clark Bailey, and Carl Norfleet, has wrought a notable achievement in securing legislation by the General Assembly which authorized the construction of five additional district tuberculosis sanatoria to be located by a commission appointed by the Governor and operated under the direction of five district tuberculosis commissions. The State Commission, under the provision of the law, has four members of the Kentucky State Medical Association on it, and each district commission is required to have two physicians, members of the Association. While the entire membership of the Planning Committee is entitled to commendation for this splendid contribution, the work of Dr. Howard has been quite outstanding. In recognition of this, his home community brought statewide attention to his public and professional achievements at a celebration in his honor in July of this year. At this meeting, the State Medical Association was represented by the President and President-Elect and other officers and members; addresses eulogizing Dr. Howard were given by official and lay representatives from all over the state. Therefore, in view of the unselfish work of the Planning Committee, the Council moves a vote of thanks for the fine public service rendered by each member in representing the Association before the people of Kentucky on behalf of this forward-looking legislation.

The Council has cooperated, collectively and individually, with the State Chairman for Procurement and Assignment in connection with securing additional physicians for the Armed Forces and obtaining relocations by physicians in sections of the state where the need had been greatest. There have been very few additional physicians commissioned during this last year, but quite a number of doctors have been relocated, bringing the total to well over 100. There are, however, according to the report of the Secretary, still a number of places in the state where a lack of adequate medical care exists. All members of the profession having any knowledge of physicians available for relocation should get in touch with the State Chairman, Dr. P. E. Blackerby, and assist him in every way possible in placing doctors where they are most needed.

In the 1943 report of the Committee on McDowell Memorial, presented by Dr. Irvin Abell, it was recommended that the Association make the necessary repairs on the Memorial Building at Danville, Kentucky, and upon motion of Dr. Scott of Lexington, the House of Delegates unanimously voted to authorize that the repair work be done and paid for out of the funds of the Association. The Council, at its last meeting, reviewed a bid on these necessary repairs and, after carefully considering all of the circumstances, authorized Dr. Virgil Kinnaird, a member of the Council, to cooperate with Dr. J. Rice Cowan of Danville in arranging for a contract to do all the painting of the interior of the Memorial Building, provide the necessary screens and venetian blinds, and restore the roof to the very best condition possible at this time. The Council has taken this action under express authority of the House of Delegates.

PRESIDENT PRITCHETT: I hope each delegate will read this in detail in the Journal when it appears.

This report will be referred to the Committee on Report of the Council and will be reported on later in the program.

At this time we will have the Treasurer's report, Dr. Davis.

A. W. DAVIS, Madisonville: The report of the Treasurer is in the September issue of the Journal, and I think it is unnecessary to read all the details.

PRESIDENT PRITCHETT: The report will be referred to the Auditing Committee.

The Secretary's report, Dr. Philip Blackerby.

SECRETARY BLACKERBY: Before I read this report, I would like to call attention to the fact that there was in the room

this morning the Assistant Secretary of the Tennessee State Medical Association, Dr. Hardy. I wonder if Dr. Hardy would stand up and let you see him. (Applause)

I move you, Mr. Chairman, that he be extended the courtesies of this meeting and the privileges of entering into the discussion.

The motion was seconded by Major W. B. Atkinson, Campbellsville, and carried.

Report of the Secretary

Secretary Blackerby: The work of the Secretary is so intimately linked with that of the Chairmanship of Procurement and Assignment for the State that it is my purpose in this report to incorporate Procurement and Assignment activities with those of the Secretary, and thus avoid any duplication which would occur in separate reports.

The duties of the Secretary are multitudinous, including those of editing all of the material that goes into the Journal, compiling all of the data for and preparing the Annual Report of the action of the House of Delegates and the scientific sessions at the Annual Meeting, serving as Secretary to the Council and assisting the Council in all of the activities carried out during the interim between the annual meetings. In addition, the Secretary must maintain at all times a card index and personal history records of all the physicians in the state and have the records available for reference in connection with providing information to all agencies having ethical, professional or business relationships with the Association. It will be of interest to the members of the House to know that, within the last three years, the personal history records and professional status of physicians in the state have become much more important because of the demands of Procurement and Assignment in relation to war manpower and, as a result of this demand, the headquarters of the Association is now in possession of more detailed information than had ever before been obtained.

These records, either by direct entry or code, contain information relating to place of birth, age, citizenship, premedical and medical education, school of graduation, hospital service, specialty, present and previous location, relation to Army and other service, and numerous other items of very great value to the profession. It keeps one clerk busy practically all of the time checking these records, month by month, as to changes of status in relation to location, retirement or death. This monthly checking, however, makes available at all times ready and accurate information for all purposes affecting the interests of the profession. The records are also constantly changing through the addition of new licentiates of the State Board of Health, either by examination or reciprocity. The records of new physicians are constantly being added to the established files.

From the card index and personal history records, data are made available to the Tabulating Unit, the Bureau of Vital Statistics, and other divisions of the Department of Health, in order that each may have available correct lists for use in the public service and professional correspondence. Besides the records maintained for the State Medical Association at its headquarters, the Registration Division of the State Department of Health, which handles the licensing service, has also complete professional records, and these are interchangeable with all others for any necessary medical data.

In the multigraph and addressograph setup at state headquarters, up-to-date plates are kept available for use in corresponding with and addressing not only the representatives of the profession, but public officials and some other organized groups. In addition, there are addressograph plates for use in reciprocal correspondence with secretaries or professional organizations in other states and with the American Medical Association and some few other national organizations.

At state headquarters is maintained a library, which has accumulated over the years many medical books, scientific journals, and other valuable reference material. There are bound volumes of the American Medical Association Journal from 1910 through 1943, bound journals of the Southern Medical Association from 1920 through 1943, and bound volumes of the Kentucky State Medical Journal from 1903 through 1943. There are also some published transactions of the Kentucky State Medical Association for the period 1851 to 1902. The library has the Collected Papers of the Mayo Clinic from 1905 to 1943, the Index Catalogue of the Library of the Surgeon General of the Army from 1909 to 1942, and the American Medical Association Cumulative Index Medicus from 1938 to 1943, together with many unbound volumes of scientific medical journals. The library

room is fairly capacious and well equipped for containing all of these valuable records.

I have gone into some detail in this report, in order that the profession may be made aware of the resources of the State Medical Association in the type and kind of reference material that is available at all times.

Your Secretary handled a great deal of correspondence this year in connection with getting out the August (1944) issue of the Journal, which was authorized by the House of Delegates last year as a memorial to the late Dr. McCormack. The Secretary has worked closely with a number of the Standing and Reference Committees of the Association and has assisted in every way possible in securing all necessary data for their services and reports.

In the issue of the Journal during the year we can report twenty-nine more pages of advertisements than for the preceding year, and seventeen more editorials than for 1943. There was a reduction in the number of scientific articles, from eighty-one in 1943 to fifty-eight in 1944. Fewer articles were, of course, available from the state meeting of last year than in preceding years. Here again, we would emphasize the importance of county societies sending in good papers for publication, in order to keep the Journal rendering the best service possible to the profession. It is interesting to note that county society reports published increased from a total of eighty-one in 1943 to 113 in 1944. This indicates a renewed interest on the part of county secretaries. The Journal made a larger profit from advertising and other sources in 1944 over any previous year in the history of the Association. The facts of the receipts and disbursements are contained in the Auditor's Report, which has been made available to the Council for inclusion in its report.

The Business Manager, Dr. L. H. South, has supplied me with the following information:

The office of the Business Manager has arranged for the printing and mailing of letters for the postgraduate extension courses, for county societies, and has collected news items and county society reports by circular letters which are mailed out each month. Each article received for publication is first checked for errors in spelling, punctuation, diction, etc; articles are always retyped; each is read by copy and the corrected page proof goes to the author to be read and corrected. It is then read again from final page proof, so that every article appearing in the Journal is read four times. In spite of all this careful reading, however, typographical errors appear occasionally, sticking out like a sore thumb. This year's Journals have been remarkably free from such glaring errors. So far, all articles received by the Journal have been published except the material for the October issue. This office is collecting the biographical sketch of every officer of the Association since 1851, which requires considerable research.

Fifty volumes, "Medical History of Kentucky" were sold at the Annual Meeting of the Association, and fifteen additional copies were bought by Dr. E. M. Howard and distributed to the distinguished guests, from whom we have received many appreciative letters.

Photographs and biographical sketches of the guest speakers were secured by the Business Manager, and sketches rewritten for the Journal.

All the books received for review were reviewed and the reviews published in the Journal; the books were then turned over to the Library of the Association.

Your Secretary, serving as State Chairman for Procurement and Assignment, has had the responsibility of checking and reporting each six months upon the status of all physicians under thirty-eight. This has been quite a job, since records must be made available for use in the National Procurement and Assignment office at all times. The State Chairman also has to report monthly on all deaths, retirements and relocations. It will be of interest in this connection to remind you that in one year there has been a total of 262 changes in location of physicians and relocations from other states. This is an indication of the extent of the problem of maintaining up-to-date records on doctors licensed to practice in Kentucky. It is gratifying to report that it has been possible to secure physicians for relocation in a number of rural areas, and quite a number in the industrial mining sections of the state. The State Chairman has also had the responsibility of serving as liaison between the hospitals in the state and the National Procurement and Assignment and the American Medical Association in the matter of intern and resident quotas for hospitals. This has also entailed a great deal of work, but has been followed through with as much care as possible.

Here, I desire to commend the fine spirit manifested by medical directors and hospital superintendents in conforming to the quota requirements.

I desire also to express our appreciation for the fine cooperation on the part of local Procurement and Assignment Committees. We have not had a meeting of the State Procurement and Assignment Committee for the reason that the handling of all of the Procurement and Assignment problems is a matter of routine, following policies and standards defined by the National office. Hence, this part of the Secretary's Report is substituted for any Procurement and Assignment Committee Report.

The Secretary, in cooperation with Dr. John Walker Moore, Dean of the University of Louisville School of Medicine, the President and President-Elect of your Association and others, responded to the request of the State Farm Bureau for consultation on the matter of proposed legislation to provide scholarship loans for worthy students aspiring to enter medical schools and who would be willing to locate in rural areas following graduation. This conference resulted in the State Farm Bureau having introduced in the last General Assembly by Representative Cox a bill providing for such scholarships, with what we think were quite adequate safeguards. This bill did not pass, but aroused a great deal of interest. It is our opinion that it will be considered at a future session of the General Assembly, with good promise of becoming a law and, in the judgment of those medical representatives in conference with the Farm Bureau, would serve a good purpose.

We report with a great deal of sadness that there have been seventy-six deaths of physicians, both members and non-members, in Kentucky during the last year.

PRESIDENT PRITCHETT: According to the By-Laws, this report should be referred to the Committee on Officers' Reports, but I do not see a committee thus designated. What is your pleasure, gentlemen, regarding the Secretary's report?

J. B. LUKINS, Louisville: I move that the Secretary's report be received with thanks.

The motion was seconded by several Delegates and carried.

PRESIDENT PRITCHETT: Next is Reports of Councilors by Districts.

REPORTS OF COUNCILORS

FIRST DISTRICT

T. ATCHISON FRAZER, Marion: I have very little to report. On account of the shortage of gas, rubber, and so forth, I have visited but very few of the counties in my district. I had planned to visit and, if I had gotten gas and had plenty of rubber, would have visited every county in the district. I have corresponded with all the secretaries, that is, I have written, but they haven't done much correspondence.

We have lost in our district, in the past year, seven doctors. Mayfield has been hit the hardest; we lost three of our active physicians there.

As far as West Kentucky is concerned, we are in pretty good shape for doctors. Graves County is in the worst condition of any of our counties in the First District. We have enough active men in the First District to take care of the people fairly well.

I want to say, in addition, that in my town of Marion we have established a 22-bed hospital, an up-to-date hospital. It is a non-profit corporation, and every item in it is paid for. We paid cash as we went. We went out and told the people we wanted the money to establish the hospital, and we have the nicest hospital in the state.

W. B. LUKINS: Who owns the hospital?

T. A. FRAZER: It is owned by the people—a non-profit corporation. Dr. Gant Gaither inspected the hospital the day we dedicated it. We have a staff of twelve and we have the hospital full of patients, paying expenses now. It has only been in operation three months, and I think that speaks pretty well.

We are working along in our end of the state the best we can trying to take care of the people. When the war is over we will have several younger men back in harness, and I think we can take care of the sick people in First Councilor District in a fairly good way.

SECOND DISTRICT

E. L. GATES, Greenville: The Second District is in fairly good shape, considering the condition of the doctors on account of the war. Many of our counties are so small that we have not been having regular meetings. I hope after the war is over, we can have a district meeting to take care of these smaller counties.

I hope we will have more doctors after a while.

Third District

C. C. Howard, Glasgow: Our district is getting along very well in a medical way and the people are surviving very well. Of course, we have lost our proportionate number of young men and we have lost more of our middle-aged men by death. That has been the hardest thing in our district. We are continuing our district medical meetings. I think that is by far the best thing. I am sure that if the boys can go along and help carry on an army, we should carry on a medical society in civilian life. I don't see any reason for letting down about medical meetings and I don't see any reason for too many arranged programs. I still am in favor of using a lot of young men and letting them develop, because that is the best way. Our society is going along very well and the men attend our district meetings. Our district meetings are the best thing we have.

Fourth District

J. I. Greenwell, New Haven: I haven't anything to report. Everything is about the same as it was last year. We have had, I think, two deaths in our district and the paid-up membership is something like ten or twelve more than last year.

Fifth District

J. B. Lukins, Louisville: I am glad to report from the Fifth District that, while medical activities have necessarily been restricted by the dearth of doctors, there seems to be increasing interest in medical society proceedings. With the exception of Franklin County, I have visited every county society in my district this year. That is the best record I have ever made as Councilor. In both Henry and Shelby Counties we had enthusiastic meetings. The Henry County meeting was particularly noteworthy in that all the doctors in the county, with their wives, were present except one, and he was absent on account of an emergency call.

We had a district meeting in Carrollton in June, with a large attendance, and we felt particularly honored by the presence of the President and the President-Elect of the Kentucky State Medical Association and the President of the Southern Medical Association.

The district feels the need of some well-qualified young doctors.

I want to say that the district meeting in Carrollton was arranged by the President of the Fifth District, Dr. Sam Brown.

I believe that the district meetings should be continued and an annual meeting held if possible.

Sixth District

Major W. B. Atkinson, Campbellsville: For certain reasons over which I had little control, I have not been as active as formerly. Our district is all rural. Fourteen physicians from that district are now in the Armed Forces or have been. One has died in service. One of the counties has furnished no men to the Armed Forces, for which I take full responsibility, because they have 16,000 people in that county with four active physicians, and I think that they are more needed there than elsewhere.

We have found that our county society activity has been largely the election of officers at one meeting. The remainder of the time we try to keep up with private practice with the fewer number of physicians and more people now calling physicians. We hope that when the war is over we will be able to get back in our stride as the most progressive district in the State Association.

Seventh District

Virgil G. Kinnaird, Lancaster: My district, as you know, is a rural district. It has been impossible for me this year to visit each county seat. I have been to Somerset, where Dr. P. F. Barbour put on a very splendid three-day post graduate program. We have had no Councilor District meeting. We have furnished a great many men to the service. Our doctors are getting old and all the young ones are in the service. I think our district is going along pretty nicely although we need some more young doctors.

Eighth District

J. M. Blades, Butler: I have the pleasure of presenting the report for the Eighth District. This district has 152 paid members and 19 non-members this year. By counties they are as follows:

County	*Members*	*Non-Members*
Boone	4	2
Bracken-Pendleton	13	1
Campbell-Kenton	94	9
Fleming	8	2
Grant	8	0
Harrison	14	1

Mason	4	4
Nicholas	5	0
Robertson	2	0

Some of the non-members have retired, owing to illness or advanced age. In Campbell and Kenton Counties, some have their residence in these counties but have their offices in Cincinnati, where they are members of the Academy of Medicine.

All counties except the two smaller ones have organized societies.

The Licking Valley or Eighth District organization meets quarterly. With the exception of the December meeting, which is held in Covington or Newport, all meetings are held in the various counties. Most of the men are in the upper age bracket and, with the extra heavy practice, they cannot attend the meetings if at a distance. We have had some good programs, with speakers from Lexington, Cincinnati and Louisville.

Owing to heavy duties, I have not had time to visit the various county meetings, but I have tried to keep in touch with them. With the absence of so many of our young men in the service, the older ones are doing a wonderful job at home. I have not heard of anyone in need of medical service who has been refused. It is necessary that we keep our county societies active, in order that we may be an inspiration to and a source of help for the younger men when they return to home service.

I have a report of the death of Dr. C. W. Shaw, Alexandria, who was a Councilor for many years, and who passed away last week. Dr. R. H. Ryle, of Walton, another member of our district society, and Dr. C. C. Tanner, Covington, died recently.

Ninth District

Proctor Sparks, Ashland: Due to increased work brought on by the war, it has been impossible for me to make any personal visits to any county meetings in my district, but I have made contacts with individual members by telephone and personally. We have not held any district meetings in the Ninth District. I am unable to state how many doctors we have furnished the Armed Forces, but quite a few, considering our population. The remaining doctors are making a valiant effort to give adequate medical care to all the people in our district.

Members in good standing are 115, as compared to 99 last year. Non-members, 38, as compared to 36 last year.

County	*Members*	*Non-Members*
Boyd	41	1
Carter	7	3
Floyd	16	11
Greenup	7	0
Johnson	11	5
Lawrence	6	2
Lewis	4	0
Magoffin	2	2
Martin	1	0
Pike	18	9
Elliott	0	2

Tenth District

C. A. Vance, Lexington: I have the honor to submit herewith the following report of the Tenth Councilor District. The county society register is as follows:

County	*Membership*
Bath	5
Bourbon	16
Breathitt	3
Clark	15
Estill	6
Fayette	121
Jessamine	10
Lee	3
Madison	32
Menifee	3
Montgomery	7
Morgan	4
Owsley	3
Powell	3
Rowan	3
Scott	15
Wolfe	4
Woodford	4
Total	257

The Tenth District has 257 paid-up members this year. Last year we had 242, and in 1942 we had 270, and in 1941 we had 270. There is an increase of 15 members this year over last year, and we are very pleased to see that we are not decreasing, as we had done previously. A number of the county societies have paid the state dues for their members who are in military service, and the dues of the others have been paid by the Kentucky State Medical Association.

There are 41 non-members. Some of these have retired on account of age or illness, some have moved away from the state, some are practicing as interns in hospitals in Lexington, some in the U. S. Veterans Facility and the U. S. Public Health Service Hospital in Fayette County. A very few are not eligible for membership.

The county societies of Bath, Bourbon, Estill, Owsley and Wolfe have all their physicians in their counties as members of their county societies.

The county societies of Bath, Breathitt, Jessamine, Lee, Menifee, Morgan, Montgomery, Owsley, Rowan, Powell, Wolfe and Woodford hold occasional meetings.

The county societies of Bourbon, Clark, Fayette and Madison held regular meetings this year and these have been well attended and their programs were instructive.

The Tenth District has suffered by death the loss of the following physicians since the last meeting of the Association: S. J. Anderson, Midway; J. A. Herring, Jr., Lexington; William K. Jones, Wilmore; Grover C. Nickell, Morehead; H. L. Nickell, Morehead; I. H. Browne, Winchester; Morton A. Cundiff, Lexington; D. B. Knox, Georgetown; G. L. Rankin, Paris.

The district lost four members by death in 1943, five members in 1942, and twelve members in 1941. Of these, one had been an intern in a Lexington hospital and was killed in an airplane crash in 1944. All of the others were older men and had been practicing for many years. They had been active in their county societies and were highly respected by their associates in practice and by their communities. All of them will be greatly missed.

In all of my reports to you as Councilor of the Tenth District (and this is my nineteenth), I have spoken of the importance of the county society. I still believe that the county society is the most important unit of the State Association, and that the State Association could not exist without active county societies. So won't you please attend your county society meetings and take an active part in them, as they are the most important unit of organized medicine.

I have planned a dinner for the House of Delegates tonight at 6:00 o'clock at the Phoenix Hotel in the Fireside Room. The list which I received from the Louisville office I am sure has some mistakes in it; I know of a number who didn't get their invitations. As you know, the House of Delegates includes the officers of the Association, and that includes, too, the Orators in Surgery and Medicine, all the Councilors, all of the elected officers, and also the past five Presidents. If any are here who didn't receive an invitation, they are invited. I have received only about seventy-five acceptances, and I am sure there are a number more than that. I want to put your names in, so there will be something for you to eat.

President Pritchett: We very much appreciate Dr. Vance's invitation.

Eleventh District

H. K. Buttermore, Liggett: The Eleventh District consists of nine counties in the southeastern part of Kentucky. Every county in my district, except one, has a county medical society and they have regular meetings six to ten times a year. All of our societies make special efforts to prepare a scientific program for their meetings, and this is followed by discussion of important cases.

Due to a shortage of doctors in our district, we have not had any district meetings during the past year, but we expect to resume these meetings in the near future.

President Pritchett: That concludes the reports of Councilors. The next is Reports of Delegates.

Reports of Delegates

Bath County

B. Ralph Wilson, Sharpsburg: Bath County has not had many meetings this year. We have six doctors in the county, five of whom are members of the County Medical Society.

Bourbon County

D. B. Thurber, Paris: I don't know exactly what I am supposed to report. We have sixteen members and three of them are in the armed services. We have regular meetings the third Thursday night of each month, which are very well attended. Other than that, I don't think we have anything to report.

Boyd County

Sam C. Smith, Ashland: Boyd County has a membership of 41, one non-member; 14 of these are in the armed services; two are retired; one is in business and is not practicing. We have five who are past 70 years of age, three of them 80 or near 80. They are all active and all doing a good job. We met monthly this year, except in July and August. We had one doctor who left the state but he is still paying his dues. One of our members resides out of the state but sends in his dues every year. We have had no deaths this year.

Boyle County

P. C. Sanders, Danville: I am the alternate and I have no official report from the county. We had an annual meeting, with 21 present, 15 of whom were from the General Hospital and are honorary members. The War Department took six of our young men and left us with nine, besides two colored physicians. Four of these are surgeons, which leaves only four of us in general practice.

We have had some meetings this year over the telephone. If Dr. C. C. Howard wants a report from our county concerning the work of the Legislature, he calls me as secretary and I call up the members and we have a meeting, but it is over the telephone. If we had regular meetings as we used to have we wouldn't have more than two or three men. That is about the only report I have.

President Pritchett: Would you call that a "phony" meeting? (Laughter)

Bullitt County

George B. Hill, Mt. Washington: This year, as last, in Bullitt County, I found myself arguing along the way, "Well, what shall I do with this county society?" We have in our county at present six doctors, two members and one nonmember. Two just moved in recently and I haven't learned their status as far as their relationship to the State Association is concerned. I will find that out later and maybe we will get them in.

Since last year we have lost two by death. One, who was ill at that time, passed away; another came to us from Harlan County. We had enough members at that time to have a meeting, at which we elected new officers. They honored me with the county presidency and Dr. Giannini was elected secretary. One week later he died suddenly. So again, myself and one old man, who hasn't worked in quite a while, constitute the society. Otherwise we are getting along pretty well. There are rumors that other doctors are coming in. I hope they do.

Butler County

D. G. Miller, Jr., Morgantown: We have three doctors in the county and all are members of the County Medical Society. We have had very few meetings this year.

Calloway County

Hugh L. Houston, Murray: Calloway County has ten active members and one inactive, with five members in the service. None has been lost by death, but one member has moved away and located in California.

The society meets irregularly and the membership last year took part in the state-sponsored postgraduate meeting held at Mayfield.

The doctors in our county worked quite diligently in cooperation with the program for the establishment of the rural tuberculosis hospitals that the state has just seen fit to give us money to put up.

Campbell-Kenton

William R. Miner, Covington: I have no regular report. The man who was supposed to make it has not shown up. We have a regular membership of about 115 active members. We have meetings once a month, with approximately 25 or 30 average attendance. We have had very good programs. We have been honored by the Secretary of the Board of Health on two occasions, by Dr. Oscar Miller, our President-Elect, and other distinguished speakers. We feel we are making progress. Everyone seems to be interested in the society and we hope to continue on that basis.

In our locality we have a Cancer Control Clinic, which was recently established at Booth Memorial Hospital. This has a complete personnel, technicians, pathologists and X-ray people, and we serve all the counties in our district. This promises to be of great help.

Carroll County

J. Sam Brown, Ghent: We have three active members in our county and one who is an osteopath, but who is entitled to all the rights and privileges of an M.D., although he doesn't happen to be one. We have lost no members by death, none to the armed services. Our society doesn't have regular meetings, but we had a most excellent district meeting to which Dr. Lukins has made reference.

Carter County

Smithfield Keffer, Grayson: We have ten members, but our Councilor counted in our Health Officer, who went away June 1st; he didn't practice much when he was there because he had other things to do. When you think of Carter County, you think of Elliott County and Lawrence County and Boyd County and Greenup County. We get calls in all of them. We don't think anything of making a twelve-mile call in the middle of the night. That is commonplace. We have one very well-

manned hospital and it is usually so busy that it can't accommodate its patients. There are a few of us old fellows who are supposed to do the outside practice. Of course, we get faraway calls, but usually we go. When you think about going over roads in a sled, in a jolt wagon, and on horseback, you know what kind of calls we get. We get calls that you can't make with anything but a Missouri mule, and he would have to be shod to get there. We live out in the sticks. The road commissioners haven't found out that we need roads there. If any of you have any pull with the Commissioner of Roads in your county I wish you would see that he gives the Kentucky doctors a chance to get places, even with a horse and buggy. We would be glad to do that. Some of the places we can't reach. We have one very old man who doesn't do much; we have two or three old men in the eastern part of the county who do less. We have a very few active members. The only man who would be really active is Dr. Strother, who has never been allowed to come home since he graduated—they have got him in the Navy. If he were home he would do pretty well. Let's all pray that the war will end soon so we can get a young doctor in our county.

Christian County

Quinn S. Cost, Hopkinsville: Christian County has regular meetings of the county society, pretty well attended. We have 17 members in active practice, with three or four out at the State Hospital who come to the meetings. The meetings are usually attended by the men in Trigg and Todd Counties. We are very proud of our new hospital addition over at Hopkinsville and of the new Health Department which has just been opened.

Crittenden County

T. A. Frazer, Marion: We have five active doctors in Crittenden County, three of them well past seventy, but we are taking care of the practice very well. We have good roads in most of Crittenden County and take care of the work pretty well. Since we have our hospital, it makes it much easier. We are getting along very well and taking care of the people. We have lost one doctor by death since our last meeting, one of the most delightful characters I ever knew. Though he had been out of the practice of medicine several years, he was devoted to the medical profession and kept up his membership in the county and state societies.

Cumberland County

William Fayette Owsley, Burkesville: This is a long walk for so little to say. Since our last meeting we have lost two doctors, Dr. J. E. Bow, who was our President, and Dr. J. R. Webb, our Vice-President. It has been our custom down there to elect people for a lifetime job, and that leaves only two, Dr. Davis and myself. Dr. Davis has automatically become President and I am holding my same job as Secretary and Treasurer. We are both in good standing.

Daviess County

Major F. J. Condon: I am just officiating in the capacity of alternate to the alternate. Daviess County should have a membership of 40. There are 29 in practice and 11 men in service. Of these 11 men in service, six have had their dues paid, and there are five with dues unpaid. One entered the military service within the past year and one was discharged with disabilities.

The Daviess County Medical Society meets semi-monthly. Programs consist of scientific papers and discussions. We have four non-members in the county who would be eligible, except that they are largely inactive because of advanced age and infirmities. There are four osteopathic physicians.

In general, medical facilities and personnel are adequate. Everyone does all the work that he wishes to do, and many are doing perhaps more than they care to do.

The society tried to stimulate and promote interest in the statewide tuberculosis program. They have been active recently in setting up a pneumothorax refill station, anticipating that perhaps this may swing into line pretty well with our new program.

There is assurance that there will be an additional hospital erected in Owensboro as soon as the priorities are properly cleared. This will be a diocesan hospital, which will be built, maintained and operated by the Sisters of Mercy.

Fayette County

Ernest B. Bradley, Lexington: I believe the Delegates like to hear the reports of Delegates from other counties. It always seems to me one of the most valuable things in the House of Delegates. That is why I have come to the microphone.

We have a membership of 121, of whom

39 are in the service and 11 are in the Eastern State Hospital, in service, not as inmates, and six are at the United States Veterans and Public Health Hospital. That gives us 71 active members. Most of these are old and infirm like myself, which means that we have a good deal to do, but we were awfully glad that the State Medical Society decided to meet here, and all of us, whether young or old, are glad to have you.

Fayette County Medical Society has met regularly once a month in the past year, with papers by its members, usually, and the meetings have been well attended.

We have had no deaths during the last year, so maybe it has been very good for the older members to work a little bit harder. This is the first year since I have been making reports that we have not had any deaths.

Fayette County, together with the City of Lexington, has a fulltime Health Department and I think for the fifth successive year it has won award given by the United States Chamber of Commerce and the American Public Health Association as an outstanding county in health and preventive work.

The dues of all the members in the service have been paid by the members of the Fayette County Medical Society; in other words, the Fayette County Medical Society has been just as active as in the past.

Fulton County

John G. Samuels, Hickman: The County Society has a membership of 15, of which five are in the armed services, and one non-member of the Kentucky State Medical Association. There has been one retirement of a non-member because of ill health. One member has returned to active practice in the county after four and a half years' absence. There have been no deaths in the county.

Garrard County

J. E. Edwards, Lancaster: The only change in the doctors of Garrard County in the last year is that they are all one year older. We have five white doctors, four of whom are members of the Society, and one non-member. We have one colored physician in the county. We have no meetings except to elect officers. Sometimes only one of us does that.

Grant County

J. J. Marshall, Crittenden: As our Councilor said, The Grant County Society is a hundred per cent Society and has been ever since I have been a member. We have five doctors in practice and three in the service. We have gained one doctor in the last year, a lady doctor who was formerly a health officer. We have lost one doctor, Dr. J. T. Davis, who moved to Louisville. We have lost our health officer by his moving to Texas. We need about three more doctors in Grant County. We need one at Corinth, we need one at Dry Ridge, and we need one at my town, Crittenden. I wish our good Secretary would send us at least one.

We have had one case of poliomyelitis in the last year. It happened to be my case. It lived only four days. We had one case of spotted fever, which recovered. We have had two cases of typhoid fever, both of which recovered.

We meet about six times a year. Our doctors are five in number and three are old. We have only two doctors who are really able to do much work, but we have had a wonderful record; we three old doctors have kept them going some way and somehow.

Greenup County

C. B. Johnson, Russell: Greenup County has 10 doctors, 7 active members and 3 non-members. Two members have retired because of age. One is ineligible. We meet about three times a year. We have a rather long, oblong county, and the Boyd County Medical Society asks that we in the upper end of the county attend their meetings. At the lower end of the county, which is across the river from Portsmouth, Ohio, there are two doctors, one 70, one retired and one very active, who have been extended the privilege of attending the society over in Portsmouth, Ohio, so our members attend pretty well. I haven't heard much complaint of lack of medical service. In the lower end of the county, this gentleman of about the age of 74 or 75 does more work than any young man in the state. I will put up his record against any man because he will deliver and take care of from 120 to 140 obstetrical cases a year, and he does other practice. How he does it I don't understand. That is why our county is very well taken care of.

Hardin County

J. M. English, Elizabethtown: Hardin County has a membership of 16, with one in the armed services. They range in age from 80 to 44. All but three in the county are past their middle sixties. We have a meeting each month. We always manage to have a quorum. We have opened a new health center in the last year, with a full personnel, and it is adequate to take care of all the venereal disease that we have by reason of being close to Fort Knox.

We did not vote the membership fee for the one who is in the armed services because he insisted that we not do so.

Henderson County

R. Emerson Smith, Henderson: Henderson and Henderson County are now beginning to see the results of years of effort to obtain a modern, up-to-date hospital. Construction of a new 80-bed hospital, sponsored jointly by the city and county of Henderson, was started in May 1944. Funds for its erection were secured under terms of the Lanham Act. Because of wartime restrictions on structural steel, the building will be of one-story design, with brick exterior and facing tile walls in the corridors, operating rooms, labor and delivery rooms. Walls of rooms for patients will be of plaster. In design, there is a main central corridor approximately 300 feet long. To the east are four wings to accommodate X-ray and surgery, the kitchen and dining rooms, the outpatient and emergency surgery services, and the administration. To the west are four wings for general colored, white medical, white surgical, and white maternity cases. Each wing accommodates 20 patients. A separate labor and delivery room is provided, which is air-conditioned and soundproof. The nursery adjoining will contain 20 cubicles of clear plate glass for 20 bassinets. Isolation, where required, is provided in the nursery and also in the maternity wing. The hospital is to be equipped with modern diagnostic X-ray equipment and therapeutic X-ray equipment is to be added later.

There is concrete subflooring with asphalt tile overlaid throughout the hospital, except in the surgical, labor and delivery rooms where tile will be used. In addition to the regular wiring for electrical current, there is a second circuit throughout the hospital, including the operating rooms and labor and delivery rooms, which will be connected to a bank of storage batteries in the basement. At the west end of each wing for patients is a solarium which can accommodate four additional beds in case of emergency. If the demand requires it, the capacity of the hospital can be increased from 80 to 100 beds.

All doors in patients' rooms are large enough to permit a hospital bed with its patient to pass through the door easily, and by using the ramp leading from the solarium to the lawn, any wing can be quickly emptied in case of fire.

The building should be ready for occupancy by January 1, 1945, and will represent an expenditure of more than $500,000.

The estimated population of Henderson County is now over 37,000. Henderson has had a very substantial increase in population in the last three years. This growth has been due to three factors: the Ammonia Plant located two miles from the city; Camp Breckinridge at Morganfield; and the many war industries in Evansville, Indiana, across the river. But much of the increase in population in Henderson proper is permanent. New sections have been added to the city and over 500 modern dwellings have been built.

There are 14 practicing physicians and one retired physician in Henderson (two of this number are colored), the director of the Henderson County Board of Health making 15 physicians in the city proper, and there are five practicing physicians in the county. Of this number, 13 are members of the Henderson County Medical Society. The Henderson County Medical Society has been unable to meet as often as was desired, largely due to the increasing demands made by the community on the profession.

The health of the city and county has been exceptionally good. There have been no epidemics and the mortality rate will probably be considerably less than last year. The privately owned hospital of 36 beds has rendered a magnificent service to the community, in spite of the difficulties in obtaining nurses and most of our nurses going into the armed forces. Older nurses and some that had retired have returned to active duty and have rendered a truly patriotic service. Auxiliary nurses have been of great assistance in helping maintain the efficiency of our hospital.

Jefferson County

James S. Lutz, Louisville: The Jefferson County Society is a pretty active society. It meets once a month now. It has been meeting twice a month, but, starting the first of October it will have only one meeting a month.

Most of the doctors in Louisville are members of the county society.

We have a Judicial Council and all names are submitted to that Council before they are submitted to vote before the county society to become members. I happen to be one of the Judicial Council, and we had to turn one man down this year; he had a very savory reputation. We try to keep our membership clean with men who are 100 per cent.

The Jefferson County Medical Society has had 11 meetings since January 1st. These included two dinner meetings at the Pendennis Club, one meeting at the Bowman Field Base Hospital, one meeting at Fort Knox Station Hospital, and a joint meeting with the Louisville District Dental Society. On May 22, we had as our guest speaker, Dr. Geza DeTakats, Professor of Surgery, University of Illinois School of Medicine.

The average attendance at these meetings has been 75.

We have 302 active members, 45 associate members, 15 affiliate members, 6 out-of-state members, and 155 members in service.

The society has lost 10 members by death since the first of this year, namely:

Ellis Allen, Jr., January 13, 1944.
A. W. Nickell, February 15, 1944.
Adolph O. Pfingst, February 25, 1944.
John M. Keaney, Sr., March 5, 1944.
Courtland Beeler, April 9, 1944 (on active duty in England).
Virgil E. Simpson, May 3, 1944.
J. W. Craddock, August 1, 1944.
Edward J. Meyer, August 1, 1944.
H. Arch Herzer, August 26, 1944.
Lee Kahn, September 14, 1944.

Secretary Blackerby: Mr. President, I move we adjourn for lunch and reconvene promptly at 1:30 with all Delegates present.

The motion was seconded and carried, and the meeting recessed at 12:15 p. m.

Monday Afternoon, September 18, 1944

The meeting reconvened at 2:00 p. m., J. Watts Stovall, Grayson, Vice-President, presiding.

Chairman Stovall: If it is the will of the Delegates, we will proceed with the call of the roll of counties for their reports.

Letcher County

Owen Pigmon, Whitesburg: Letcher County has 17 physicians located in the county; one specialist located outside the county doing part-time practice at Jenkins; also four physicians in the Army. All are members of the County Society and the Kentucky State Medical Association and are in active practice.

We have regular monthly meetings, with an average attendance of about 40 per cent for the year 1944.

Logan County

C. A. Wood, Auburn: Logan County has 12 men in active practice, including the Health Officer, who also has charge of Public Health, but out of these 12 there are only two of us, with the exception of the Health Officer, under 65 years old. We also have three in the armed services —one in the Navy, two in the Army.

McCracken County

H. S. Reynolds, Paducah: I am not the regularly constituted Delegate from McCracken County. Dr. Higdon and Dr. Frank Boyd were not able to attend and I was appointed to take their places. Dr. Goodloe is here as alternate. I tried to get him to report, but he wouldn't.

The McCracken County Medical Society has had regular monthly meetings until June, July and August, with 95 per cent attendance.

Each month a well-rounded program has been presented, such as diagnosis and treatment of poliomyelitis; reports on Kentucky medical groups with the Governor; report on the cancer program; shock: etiology, prevention and treatment; physical examination and clinical judgment for the diagnosis and management of obstetrical cases, only as an adjunct. Sponsored meeting to discuss establishment of a tuberculosis hospital in this area.

The McCracken County Medical Society has 43 active, paid-up members; one new member over last year, Dr. Wallbright, and no deaths.

We have four men in the service, one in Africa, one in Italy, one in New Guinea, and one in France.

Madison County

Robert Sory, Richmond: The Madison County Medical Society held a meeting,

with a scientific program, each month during the past year, with the exception of the months of July and August.

The society reports 35 members, quite a number of whom are in the armed forces. The society went on record as opposed to the Murray-Wagner-Dingell Bill and recently passed a resolution in support of the location in Madison County of one of the proposed five new tuberculosis sanatoriums.

Menifee County

Richard F. Adler, Frenchburg: Our county has to announce one member retired because of ill health. At the present time there are only three physicians engaged in practice, two of whom are members. No regular meetings were held.

Montgomery County

D. H. Bush, Mt. Sterling: We haven't had any regular meetings; only called meetings. We have six physicians, all members of the society, who take care of the practice all right. We get along all right with the number we have and are doing very well, only we wish we could have more meetings, but we will have later.

Owen County

R. S. McBee, Owenton: The Owen County Society remains about the same as it has for several years. There are four doctors active in the county, one of whom is a non-member. We have not lost any by death or to the service. We attend the Fifth District meetings regularly.

Pulaski County

J. H. Horton, Burnside: The Pulaski County Medical Society has 17 members. There are three physicians in the county who are non-members. There are nine doctors from the county in the armed forces. They are: Lt. Col. Morris Holtzclaw, Major Arthur L. Cooper (wounded in action), Lt. Commander Samuel Paris, Lt. Commander J. S. Newman, Capt. Livingston H. Wahle, Captain Marion C. Spradlin, Captain Richard Weddle, Captain Robert Jasper, Captain Charles Noel Hall.

Captain Hall was wounded in action and has been awarded the Purple Heart.

During the year, death has invaded the ranks of our society and has taken from among us Dr. Thomas M. Garner, a highly respected member who was always near the top in the state in the number of babies delivered each year. He is sadly missed.

The entire society was shocked by the untimely death of Captain Morton Cundiff, a Flight Surgeon, who was killed in a plane crash in the Isle of Man, while en route from his base in England to Ireland. Captain Cundiff was a brilliant and courageous young man. Pulaski County and the State of Kentucky has lost a great doctor in the death of Dr. Cundiff.

The Somerset Hospital, on which construction was started in 1941, is 75 per cent complete. After the expenditure of $250,000, work was stopped in 1943 because of lack of funds. The City of Somerset is going to vote on a second bond issue of $75,000 in November, which amount will be adequate to complete the hospital, as most of the furnishings and the equipment are already bought and in storage. This will make the total cost of the Somerset Hospital $325,000.

Our society was host to a Postgraduate Extension Course, sponsored by the Kentucky State Medical Association under the leadership of Dr. P. F. Barbour and Dr. W. W. Nicholson, which was held at the Beecher Hotel, Somerset, during the months of May and June. The speakers on these programs were outstanding men in their specialties from Louisville and Lexington, and the programs were very interesting and enjoyed immensely by our members and those of the neighboring county societies.

We highly recommend the Postgraduate Extension Course to any county society that has not already availed itself of this wonderful opportunity, and we wish to thank Dr. Pritchett and Dr. Nicholson and Dr. Barbour for making this course possible. We also extend our thanks to each one who had a part on the program, and we hope that we may have the opportunity of having similar series of lectures next year.

J. B. Lukins, Louisville: What is the capacity of your hospital?

Dr. Horton: Seven beds.

Scott County

We have 16 physicians in Scott County. They are all members of the society. Four are in the armed forces. We meet the first Thursday in each month. Our minutes are regularly sent to the Journal.

Woodford County

George H. Gregory, Versailles: We have eight men in medicine now, two of

whom have virtually retired this year—Dr. W. O. Sublette and Dr. W. E. Risk. There are six men practicing actively in the county. We have had, I am sorry to say, no meetings this year, and we have lost by death one member, Dr. S. J. Anderson, Midway.

SECRETARY BLACKERBY: We are supposed to call the roll at the beginning of each session. I have called the roll from Jessamine down, and I will now call the beginning of the roll.

The Secretary called the roll.

SECRETARY BLACKERBY: That completes the roll call and there is a quorum present.

PRESIDENT PRITCHETT: I am going to ask your indulgence. For a very excellent reason Dr. Pickett is called to Louisville as soon as possible. She comes farther down on the program, but she has a very important report to make to us and the Chair will entertain a motion that she be allowed to present her report now for the Obstetrical Advisory Committee.

MAJOR ATKINSON: I so move.

The motion was seconded by C. A. Vance and carried.

REPORT OF THE OBSTETRICAL ADVISORY COMMITTEE

ALICE N. PICKETT, Louisville: I have some good news for you and I am so glad you are going to let me tell it to you. I even brought some little charts to prove it.

The trend in maternal mortality rates in Kentucky has been downward since 1915. During the past nine years, from 1935 through 1943, the maternal mortality rate has been reduced exactly by one-half. The maternal mortality rate for 1935 was 5.0 per 1,000 live births, and for 1943, 2.5. You remember how that maternal rate was steady, year after year, year after year, and nothing seemed to be able to pull it down. You may be able to see the figures showing how many women were delivered and what the rate was, how many babies there were per thousand of population. Next to the last column is the actual number of women lost, and the last column is the rate per 1,000 live births. That has been worth working for. It is an inspiring thing. It has been done by the training of our young men, by the Public Health Officers, by the nurses, by the lay groups, and by all of us pulling together.

The three leading causes of maternal deaths in Kentucky, as in the nation as a whole, are: (1) infection, (2) toxemias, and (3) hemorrhage, in the order named. In Kentucky, though infection ranks first as a cause of maternal deaths, it does not rank relatively as high as in the nation. On the other hand, in Kentucky toxemias and hemorrhage both are relatively more important as causes of maternal deaths than in the country as a whole. Though maternal deaths are decreasing, the birth rate has risen to 24 and 24.1 per 1,000 population, respectively in last two years. These rates are higher than for any year during the past 20 years. It will be seen by the chart that the actual number of births in Kentucky in 1942 exceeded by approximately a thousand the number which occurred in Kentucky in 1943, though the rate for 1943 is slightly higher than for 1942.

Since 1939 we have had statistics available on the number of deliveries attended by physicians and by untrained midwives, and on the number of hospital and home deliveries. In 1939, 80.6 per cent of Kentucky's births were reported by physicians, whereas in 1943 this percentage had risen to 87.3 per cent. During this same period of five years, the number of midwife deliveries declined from 18.8 per cent in 1939 to 12.5 per cent in 1943. The increase in the number of births attended by a physician during this five-year period has been 6.7 per cent. The decrease in the number of births attended by midwives has been approximately the same, namely, 6.3 per cent during the same period.

In 1939, the number of women delivered in the hospitals of Kentucky was about equal to the number of women delivered by midwives. You see how splendidly our hospital deliveries have gone up and how splendidly the midwife deliveries have gone down.

In 1940, Kentucky was reported as being the forty-sixth state in the Union (that is, third from the bottom) as regards number of births occurring in hospitals. In that year, as will be seen from the chart, there were not quite as many births occurring in hospitals in Kentucky as were being reported by midwives; the percentages were 18 and 19, respectively. The most striking change in these statistics during the past five years has been in the increase in hospital births from 15.7 per cent in 1939 to 33.5 per cent in 1943. In other words, during this five-year period the number of Kentucky births occurring in hospitals has

more than doubled.

I want to give you a little report on our Oneida Maternity Hospital. You all know the setup there. We had four walls and a leaky roof. The Children's Bureau pays for the personnel; the State Board of Health pays for the physical running of the place. We have Dr. Caffee up there. Here are a few notes that I thought would be of interest to you.

Two important improvements were made in the physical equipment of the hospital during the past year: (1) The source of the water supply was changed from well water (which was full of minerals and salt) to river water; (2) the Nurses' Home was enlarged by the addition of four bedrooms and a recreation room. This building was done to accommodate our staff, which had been increased due to the expanded program of the hospital.

The hospital continued to show a steady increase in the number of admissions, in the number of deliveries, in the number of days of care given, and in the number of gynecological operations performed, chiefly to repair damage done at previous unattended deliveries. From July 1, 1943, to June 30, 1944, there were 416 admissions to the hospital; 294 deliveries and 297 births (3 sets of twins) in the hospital; 7606 days of care given; 3 maternal deaths, 10 infant deaths, and 10 stillbirths. The tragic story of prenatal neglect preceding the deaths recorded is told in Dr. H. H. Caffee's reports, and the need for adequate case finding and case followup service for the hospital is stressed by him as a means of reducing both maternal and infant mortality in this mountain area.

They have done some nice work up there. They have developed a group of nurses' aides. Of course, they are short of nurses, as we all are, but they are using the local talent that they have and are not only getting the work done in that hospital but are developing their women as well. I believe from Berea the dietitian and secretary help the business management of the place.

The proudest part of this whole report is about our EMIC program. In 1943, the number of births in Kentucky where the father was reported as being a non-commissioned officer in the Army, Navy, or Marines was reported as 7,482. We do not have a comparable figure under the EMIC program for this same period of time; however, from July 1, 1943, to June 30, 1944, a total of 8,214 applications for the EMIC program were authorized. Of these, 7,780 were for maternity care, a higher figure than the 7,482 total non-commissioned officer births reported. Perhaps an increase in the number of births to military personnel occurred during this period. Also, some of the women who applied for maternity care in Kentucky were transient, and though they may have had prenatal care here, the delivery may have been elsewhere.

Applications for sick infant care have constituted only 5.3 per cent of the total number of applications for medical service under the EMIC program. That is very much lower than it is in many of the states, almost 50 per cent lower than in some of the states.

The peak month since the program started was June 1944, when 1,090 applications were authorized, 1,038 of these being for maternity care. The second highest month was May 1944, when a total of 893 applications were approved. During the first year of the program an average of 685 applications were approved each month. The physicians of Kentucky deserve a great deal of credit for the patriotic service which they have rendered on the home front to families of service men. The cooperation of the medical profession in Kentucky has been splendid.

A higher fee schedule for physicians in cases whose applications were signed on or after April 12, 1944, was approved by Washington in April. Through an error in printing, the effective date for beginning payment of these fees was omitted from the first schedules which were mailed to physicians and has caused some confusion. The new fees permit the payment of mileage for home deliveries and for calls on sick patients where the distance is greater than five miles. Another improvement under the new schedule is that additional payments can be made when maternity cases develop non-obstetrical complications.

Our Bureau of Maternal and Infant Care wouldn't do anything about those increased payments until Washington told us we could. It does seem rather odd that we pay $35 for one woman and $50 for another woman delivered on the same day, but one of them was registered before the day set and the other registered after.

I sit on that Obstetric Advisory Committee of the Children's Bureau at Washington. Dr. Eastman, who is the Chairman of that Committee, has asked sever-

al of the men who are most vitriolic in their opposition to it, just to come, not to the Bureau in Washington, but to his offices at Hopkins. We had an afternoon session and a night session down there and the next day we went to Washington and some of our difficulties were ironed out. We, of course, deplored the attitude that some of our societies took. The worst thing about it, it seemed to me, was that those men who were criticizing the Administration and the use of the funds in this way were doing more for state medicine than anybody else. Dr. McCormack used to say we doctors were all right, but we were the worst politicians in the world.

It is hard for us to keep in mind always what the public is thinking. The man in the street knows there are a lot of men in the service; he knows they are risking their lives; he knows they are in foxholes; he knows they are being wounded and killed; he knows they are not being paid enough to take care of their wives and their children, and they are fighting for us. So they appropriate this money and ask the doctors—they don't demand—to take care of these women. All that the man in the street knows is that these men should have consideration and their families should be taken care of, and this matter about regimentation and private doctor versus specialist and all that doesn't mean anything to him. He knows we don't pay the boy for what he is doing for us; he knows money is appropriated to take care of his wife and child, and all he wants to know is that that is done.

Many of the states took care of the women for nothing, but the man in the street wants to know that the work was done and who did it. We are going to have a pretty powerful group to go up against when these men come back—The American Legion.

I think Kentucky's position is pretty strong because of the splendid and generous cooperation of the great majority of our doctors on this question.

PRESIDENT PRITCHETT: You have heard Dr. Pickett's interesting and comprehensive report.

C. C. HOWARD, Glasgow: I move it be accepted.

The motion was seconded by J. B. Lukins, Louisville, and carried.

PRESIDENT PRITCHETT: Next is the report of the Medico-Legal Committee, by Dr. J. B. Lukins.

REPORT OF MEDICO-LEGAL COMMITTEE

J. B. LUKINS, Louisville: The Medico-Legal Committee is glad to report that we have had the quietest year in twenty years. This does not mean that we can relax our vigilance or our continuous attempts at accuracy in diagnosis and treatment, because trouble is always lurking around the corner.

We have two fracture cases, one X-ray burn, one death following tonsillectomy, one burn supposedly from a hot water bottle, one anesthetic case the details of which are uncertain, one case for holding post mortem without legal consent, and one case that did not come to trial but was compromised for a small amount. That is the only case that has been compromised in two years, and the amount given in the compromise was just about what the patient had paid when he entered the institution. There have been several threatened cases, but only five cases were filed this year.

The total cost of the Medico-Legal Committee for the year has been $847.80. In round numbers, this is about half the usual annual cost.

We wish to remind the members of the profession of the great importance of reporting at once when a malpractice suit is threatened. If I could get every doctor in Kentucky to understand that he should not wait until suit is filed, but as soon as he knows trouble is brewing (and surely we are all experienced enough to know when people are satisfied or when there is some undercurrent) report that to me at once, I honestly believe that we could prevent nine out of ten cases from ever being filed. This will save time, trouble, embarrassment, and frequently money. I want to ask you delegates at the very next meeting of your county societies to endeavor to impress on the members that they should report to me at once when trouble is brewing, giving all the details. So many doctors write in, but do not give the name, sex, age of the patient, whether it was a fracture, obstetrical case, or operation; and without sufficient data your committee is unable to function properly. You can readily understand that until we get the details we lose about two weeks' time. By the time we send back and get the details, we have lost a lot of time.

Please remember that more cases are prevented than are tried in the courts, at least eight to one. I think I am justified in saying that we are proud of our

record this year and for the last several years, but with the cooperation of all the doctors, we can still further reduce the number of judgments.

P. E. Blackerby
A. W. Davis
J. B. Lukins, Chairman

Major W. B. Atkinson, Campbellsville: There is one little matter that I think should be in the record that Dr. Lukins was too modest to tell. One of the reasons that the expense was less is that last year he told his counsel that his secretary was not spending as much time on medico-legal matters as she had formerly, and therefore, at his request, the cost of the secretary for this medico-legal work was reduced so far as the Association is concerned. She is still receiving a straight salary, and, since I know this secretary, she is not receiving one cent more than she deserves.

President Pritchett: What is your pleasure with this report?

Robert Sory, Richmond: I move it be adopted.

C. C. Howard, Glasgow: I second that, and include thanks to Dr. Lukins because he saves us a lot of trouble.

The motion was carried.

President Pritchett: The old saying was:

God and the doctor we both adore
When on the brink of danger, not before.

The danger past, both are requited;
God is forgotten, the doctor slighted.

Report of the Committee on Postgraduate Course.

Secretary Blackerby: None of the members of the committee was able to be present this afternoon. Dr. W. W. Nicholson handed me the report and asked me to read it.

Report of Committee on Postgraduate Work

The Committee on Postgraduate Work of the Kentucky State Medical Association wishes to report that a meeting was held at Bowling Green, at which Dr. Philip F. Barbour read a paper before the Third District Medical Meeting, and two extension courses have been held since the last meeting of the Association. One was held in November, 1943, at Mayfield. This meeting was being considered at the time of the Association meeting in 1943. The following doctors took part in the course which was held at Mayfield: Drs. J. B. Floyd, J. G. Sherrill, Walter Doyle, Milton Wilder, Benjamin Brock, H. L. Linn, J. E. Dunn, Woodford Troutman, A. J. Miller, H. G. Reynolds, Alice D. Chenoweth, Leon Higdon, Wm. H. Garner, David Anchel, and Sydney V. Kibby. The last three physicians were medical officers at Camp Campbell, Kentucky.

The lectures were received with a great deal of interest, the average attendance being thirty physicians.

In May, 1944, the second postgraduate course was held at Somerset. This meeting was held at Somerset because of the great interest shown by the physicians of Southeastern Kentucky in the one held at Corbin the previous year. The local profession suggested at the time of that meeting, which was in May 1943, that a second one be held the following year at Somerset. For the Somerset meeting the doctors of Lexington were asked to cooperate, which they did most heartily. The Lexington physicians, who gave half of the sixteen lectures, were Drs. Charles N. McKinlay, A. J. Whitehouse, E. S. Maxwell, John W. Scott, Arthur Bach, W. D. Reddish, J. L. Keyes, and Thomas M. Marks. The other physicians on the program were Drs. J. G. Sherrill, Russell Teague, Alice D. Chenoweth, Hugo Polderman, F. W. Caudill, Guy Aud, Winston V. Rutledge, and Walter Doyle. The attending physicians showed much interest in the lectures, the average attendance being twenty-five.

The Committee on Postgraduate Work recommends that further postgraduate courses be held at suitable times and places.

The expenses for these postgraduate courses amounted to $66.25. Forty-four dollars of this was for expenses of the doctors giving the lecture. Twenty-two dollars and twenty-five cents was for incidental expenses. Fourteen dollars was collected for certificate of attendance, making the total net expenses $56.25.

W. W. Nicholson, Chairman
J. Garland Sherrill
Philip Barbour

President Pritchett: You have heard the report. What is your pleasure?

Clark Bailey, Harlan: I move it be received and filed.

The motion was seconded and carried.

PRESIDENT PRITCHETT: The next report is that of the Committee on Economics, Dr. C. C. Howard.

REPORT OF COMMITTEE ON ECONOMICS

C. C. HOWARD, Glasgow: First, I wish to make a report for the Economic Committee jointly with the Tuberculosis Planning Committee, which you set up last year.

Governor Simeon Willis and the Kentucky General Assembly were very kind and considerate in every respect to the appeal of your committee, jointly with other committees from civic organizations, in behalf of the sick and dying tuberculous people of our state. They enacted a basic law dividing the state into six tuberculosis districts, and also allocated $1,500,000 to build a hospital in each of five districts (bed capacity not less than 100 per hospital). The money is now invested in government bonds to help win the war; it also draws $30,000 interest yearly. All this money must be used for this purpose only. This law is to be carried out by the Governor, a state tuberculosis commission, and a district commission for each district. Sixteen doctors (members of the State Society) shall serve on these commissions.

In the name of those who are slowly coughing their lives away, we wish to thank the Governor, every member of the Kentucky General Assembly, civic organizations, and the Kentucky press for making this law possible. We sincerely urge the State Tuberculosis Commission and Governor Willis to speed the day when each tuberculosis district can dedicate its hospital to the care of its people. We beseech the Kentucky members of Congress, in cooperation with other members, to appropriate funds for the national control of tuberculosis, each tuberculosis district of Kentucky to receive its proportionate part out of said fund.

We request that a copy of this report and resolutions be mailed to Hon. Simeon Willis, Governor of Kentucky, to each member of the Kentucky General Assembly, to each Kentucky member of the United States Congress, and to the Tuberculosis Commission members. It is desirable that a copy be presented to the press that is covering this House of Delegates.

That is the report jointly with the Planning Board. I will now read recommendations for your consideration from the Economic Committee.

The State Medical Society should take a more serious interest in the development of better facilities to practice medicine in the rural districts; the following suggestions are presented for your consideration:

1. Maternity centers set up by local doctors or county medical societies (they are doing that in some of the counties); maternity nurses that are available in many counties be used in these centers. (There is already a Federal law that gives you a maternity nurse.)

2. A state loan set up by the General Assembly to assist a limited number of young men to study medicine with specific obligations to practice medicine for a specific number of years in certain districts in Kentucky.

3. Stimulate the erection of general hospitals in communities of eighty to one hundred thousand people.

4. Many counties are without a laboratory technician. (I am thinking of laboratory technicians to make blood counts, urinalyses, and those things that are essential in clinical medicine. There are many counties that have none in the county.) There will be many technicians after the War who will need work. The Army and Navy are training many boys and girls now as technicians. They can be utilized by the county societies that need them. They could be attached to the County Health Departments, and thus made available to all the doctors.

5. Health and hospital insurance should be carried to the rural people.

6. All medical projects, hospitals, etc., should be controlled by local commissions of doctors and laymen. Any outside assistance should be by grants and aids.

Burr Atkinson
Guy Aud
Clark Bailey
P. E. Blackerby
E. B. Bradley
E. S. Dunham
Hugh Houston
W. B. Moore
Carl Norfleet
G. L. Simpson
C. C. Howard, Chairman

ERNEST BRADLEY, Lexington: We know what Dr. Howard did last year in getting the Assembly to appropriate money for tuberculosis districts. I want to commend Dr. Howard for his work. This morning, when I read over this report, which I had signed previously, I thought that the word ought to be "tuberculous" instead of "tubercular," but it doesn't sound right. It ought to be "tuberculosis" in this case.

C. C. HOWARD: That is right.

ERNEST BRADLEY, Lexington: We had it "tubercular," which was worse than "tuberculous," and "tuberculous" isn't right either because the district isn't particularly tuberculous, though I am sorry to say a good many are, but it ought to be "tuberculosis" where it says "tuberculous district."

CARL NORFLEET, Somerset: As a member of the Planning Board appointed last year, I appreciated very much the pleasure of working with Dr. Howard. He has shown that he has a fountain of untiring wisdom, strength, and thought. The work has been put over. The bill has been enacted. It is ready for operation. A few days ago, if you remember, in the press the chairman of the commission for selecting sites and the other work that is to be done made a statement that it probably will be months or maybe next summer before the dirt can be turned for building those hospitals. They also, before that, stated that so few formal applications had been made, practically none. Now they say that thirty-four applications have been made and that the men on that commission are too busy to take cognizance of this and fulfill their work as prescribed in that bill. Ninety days were given them for the planning, for the selection of sites, and additional time may be granted, if necessary. It did not limit the time. However, it seems that too much additional time would be superfluous.

As you come into this hall, you will find a small map giving the different areas for these districts. I imagine you will be surprised when you step up and look at the county from which you hail and see the few deaths from tuberculosis as recorded there, but it is alarming when you add these together for the whole state. You will also note that there are more deaths from tuberculosis from your own county than are tabulated there.

In summing that up, it runs about eighteen hundred for 1943. Each day that goes by means about six deaths from tuberculosis in this state. If we wait nine months, say until next July, before the sod will be turned for building those hospitals, how many deaths will take place in that time? It will be something like eighteen hundred or two thousand. I think that if men on that commission are too busy to help get this work going, they should resign or should not have accepted. I may be just a little bit drastic on this point, but after you have worked in this line and have seen what is being done and how little has been done and how much is needed, I feel that it is pertinent to bring this point to them, that if they are going to do something, let it be before too many die. (Applause)

J. B. LUKINS: I think the passage of this bill, which was practically unanimous, marks a milestone in the history of Kentucky. This is particularly true when we think of it in connection with the new venereal disease control hospital, a write-up of which was in Sunday's *Courier-Journal*. Both of these projects sprang from activity in our own medical profession, and we realize again how fortunate we have been in Kentucky in that we have always tried to follow Dr. McCormack's leadership when he said that everything that was done medically in Kentucky started in the House of Delegates and in the Council of the Kentucky State Medical Association. Drs. Blackerby, Miller, Pritchett and several others of us represented the Kentucky State Medical Society in this public meeting demonstration that was given at Glasgow, in honor of Dr. Howard for the outstanding work that he did in the passage of this bill. I want to say to you that it was a very high-class, dignified, wonderful meeting. There were six or eight good speeches, and I think if as many nice things had been said about the average doctor as were said about Dr. Howard at that meeting it would have been more than he could have stood; it would have gone to his head. Dr. Howard took it all in his stride and made a wonderful comeback in his acceptance speech of these complimentary remarks, and we felt prouder than ever that he was a past president of this organization to which you and I belong.

There is one thing we ought to keep in mind, however, that when this money is spent and these buildings are constructed, that is merely the beginning; it still

depends on this House of Delegates to formulate plans for the equipment and the operation of the institutions that will do so much in lowering the death rate in our beloved state. (Applause)

E. M. Howard, Harlan: I want to take this opportunity of congratulating this committee and the chairman, Drs. C. C. Howard, Carl Norfleet, Clark Bailey, G. L. Simpson, and all the members of the committee. I have been very much interested in the tuberculosis program. I think that the State Medical Association, through its House of Delegates and through this committee, has taken the most outstanding step in getting as far as we have on this program that has been made in the last twenty years and more.

I once heard a famous judge lecture on the subject of "Delayed Justice." He brought out very vividly the fact that delayed justice is denied justice. Therefore, I want to agree with Dr. Norfleet that if eighteen hundred people are dying every year in the State of Kentucky from tuberculosis, and we all know it is more than that; they are not all recorded, probably, every month and every year that this program isn't successfully carried to conclusion means that more people will have contracted tuberculosis and more people will have died from it. So let's gird ourselves now, not expect the committee to do it all, but every man of us who has any influence at all, force this issue and undertake to get this program carried on as speedily as possible.

In regard to the recommendations that Dr. C. C. Howard made on rural practice, we know they are right. We know something should be done about it. I don't know whether that is the best way to attack it or not, but that is a good way, and in the absence of any other suggestion I would like to endorse the recommendations.

I don't know whether you know it or not, but it is true that under the laws of our country and under the laws of the various states, the lawmakers in their wisdom provided that justice shall be given to the poor as well as the rich. It is presumed that the rich can pretty well take care of themselves. We all know, also, that cities and industrial centers as a rule have more wealth, therefore they can more adequately care for their necessities than the rural communities. That being the case, it behooves us to help the underdog; in other words, to reach out and do what we can to further the advance of scientific medicine in the rural communities. (Applause)

President Pritchett: It seems to me that this committee has done, and is doing, and will do, if given a chance, a great work. Therefore, I wish one of you would make a motion that this report and its recommendations be endorsed and that the committee be continued for another year intact.

J. Sam Brown, Ghent: I make the motion.

The motion was seconded by W. E. Gardner, Louisville, and carried.

President Pritchett: Some time ago, I was approached, with the best intention possible, by some nurses who had a problem on hand, and still have it on hand, and asked for our help. I said, "Yes, this can be helped probably by our Association, provided we get it immediately so we can put it before the House of Delegates in proper form." I showed it to some of the others, Dr. Miller, Dr. Blackerby, and Dr. Vance, and would like to have your opinion on it. I will ask Dr. Stovall to read that request.

J. W. Stovall, Grayson: At a meeting of the State Procurement and Assignment Committee for Nurses a recommendation was made that representatives of the State Nurses Association, State Medical Association, and State Hospital Association meet to formulate plans to supply more adequate nursing service. A meeting of this committee was held, at which time a representative of the Nurses Association presented a plan for Group Nursing. This plan was rejected by the Board of Directors of the State Hospital Association because of the over-crowded conditions and lack of space in the hospitals. A committee of two hospital administrators was appointed to meet with two members of the Nursing Committee, and it recommended the following priority system for the assignment of private duty nurses:

1. That hospitals, with the cooperation of the medical and nursing organizations, have complete authority over the assignment of private duty nurses to patients.

2. That hospitals classify patients requesting private duty nursing service according to their physical needs:

Class I: Those critically ill, and in greatest need of private duty nursing care.

Class II: Those less critically ill, but for whose care private duty nursing service is essential.

Class III: Ill patients to whom private duty nursing service would be a benefit, but not essential.

Class IV: Patients desiring private duty nurses more as companions and a convenience rather than because of physical need, commonly called luxury nursing service.

3. That private duty nurses, as they are available, be assigned to patients according to the above classes rather than in the order of the request; that is, patients in Class I will receive first consideration in the order of their need. Thereafter, patients in Class II will receive next consideration in the order of their need, and in like manner Classes III and IV.

4. The patients in Class IV having private duty nurses must release these nurses for the care of patients in Class I (and, in order, Class II and possibly Class III) at the request of the hospital, if no other private duty nurses are available. Within the judgment of the hospital, the same may apply to private duty nurses serving patients in Class II, and possibly in Class III, if need is sufficiently critical, should the scarcity of nurses become so acute.

5. Should a hospital, which admits a patient in Classes I or II, have private duty nurses serving only patients in Classes I and II, such hospital can, through the registry, draw upon another hospital having a private duty nurse who is serving a patient in Class IV.

Miss Louree Pottinger, Chairman
Mrs. Myrtle Applegate
Mr. H. L. Dobbs, Baptist Hospital
Mr. A. E. Hargrove, Norton Infirmary

PRESIDENT PRITCHETT: You have heard this request.

J. B. LUKINS, Louisville: I move it be referred to the Committee on Public Relations.

The motion was seconded by P. E. Blackerby.

SECRETARY BLACKERBY: I think Dr. Lukins' recommendation that this be referred to the Committee on Public Relations is the proper step now because it is going to take some little study to get a complete interpretation of it. I know whatever action you take you want to take after careful analysis, with the recommendations of the Public Relations Committee. For your information, I call your attention to the fact that the Public Relations Committee is made up of Drs. Irvin Abell, Louisville, Chairman; E. W. Jackson, Paducah; J. B. Lukins, Louisville; E. B. Bradley, Lexington; and your Secretary, acting as secretary for the committee.

The motion was put to a vote and carried.

PRESIDENT PRITCHETT: Report of the Committee on Auditing.

REPORT OF COMMITTEE ON AUDITING

GEORGE F. DOYLE, Winchester: Your Committee on Auditing have examined the records of the Treasurer and find them correct, and we believe that your finances are in proper order.

J. SAM BROWN, Ghent: I move the report be accepted.

The motion was seconded and carried.

PRESIDENT PRITCHETT: Next is the report of the Committee on Report of the Council, John H. Blackburn.

REPORT OF COMMITTEE ON REPORT OF COUNCIL

Acting with its usual celerity and straightforwardness, our Council has for another year carried out its work with the affairs of the State Medical Association, giving attention where attention was due.

They first call our attention to the fact that the year 1943-1944 was a serious one so far as the matter of death of our leaders was concerned, which is only another way of reminding us that our leadership in medicine is, during the war, made up largely of the older men in the profession. They remind us of the death of our President-Elect, Dr. C. C. Turner, and then of the passing of our beloved secretary, Dr. Arthur T. McCormack. Dr. Van A. Stilley was elected to succeed Dr. Turner, and he passed away before he had completed the term of his office, and a successor had to be selected to fill his term. Dr. Virgil E. Simpson was another honored member of the profession who suddenly passed away during the present year, and, in its report, the Council has called attention to the work of Dr. Simpson as a delegate to the American Medical Association, and as a member of the Revision Committee of the U. S. Pharmacopoeia.

The committee would especially commend the suggestion of the Council as to the recommendations of suitable memorial resolutions regarding the deaths of Drs. Stilley and Simpson.

The Council next takes up the matter of the State Tuberculosis Sanatoria, and the appointment of a planning committee to work with the State Health Commissioner. This committee consisted of Dr. C. C. Howard, Glasgow; Dr. Clark Bailey, Harlan; and Dr. Carl Norfleet, Somerset. They later refer to the work of this planning committee, which has done such splendid and notable work in helping to pass the necessary laws through the Legislature, and for the help in securing the sites for the location of the sanatoria. Especially would we commend the suggestions of the Council regarding the work of Drs. Howard, Bailey, and Norfleet. "The Bloody Third" certainly did herself proud in the matter of the work of Dr. Howard of Glasgow.

Especially would we commend the selection by the Council of Dr. James H. Pritchett, Louisville, to succeed the late Dr. Van A. Stilley as President of the Association.

As to the financial status of the Association, the Council reports rather fully, going into the work of the Journal and its publication rather completely; giving a report showing the very definite gains made during the year as shown by the auditors' report; the fact that "the Association has provided a total of $1,700.00 to County Societies to cover the state membership dues for 340 of the Association members in the Armed Forces," which has been distributed among 58 counties. Twelve County Societies have elected to pay dues of their members in service, and quite a number of members have chosen to remit their own dues.

As to the service flag, we would particularly call attention to the six gold stars, and commend the recommendation of the Council that an early issue of the Journal contain a brief tribute to each Kentucky doctor who has made the supreme sacrifice: Drs. E. S. Allen, Jr., Louisville; Courtland Beeler, Louisville; John R. Brosheer, Middlesboro; Morton A. Cundiff, Somerset; Fred H. Greenwell, New Haven; and Walter O. McGammon, Springfield. In connection with that, I would remind you that we have already in the state headquarters the memorial for these men for publication in the Journal.

As to the Woman's Auxiliary, we commend the report of the Council regarding the discontinuance of the Supplement "for the duration," and as to the appropriation.

The statement of the Council regarding the Medical Practice Act is certainly to be commended.

The work of the Committee on Postgraduate Work and the suggestion as to the appropriation are worthy of our commendation.

The plan for awarding a Distinguished Service Medal, annually, as worked out by Dr. J. B. Lukins, Councilor for the Fifth District, is apparently quite worthy of consideration, and its recommendation by the Council to the House of Delegates should be given due consideration.

The work of the Council in relation to the State Chairman for Procurement and Assignment, and the securing of additional men for the armed forces, also the obtaining of relocations by physicians for more needed services is given proper consideration.

The matter of the McDowell Memorial and the necessity for making repairs to the McDowell home in Danville are again called to the attention of the House of Delegates, since the building should be kept in a good state of preservation.

Since a special reference is made for consideration of the plan of an annual award of a medal to the most outstanding member in the State Medical Society, I think it ought to receive special attention and action by the House of Delegates. The Council, at a recent meeting, took the position that since adoption by the House of Delegates is necessary, no action should be taken in the matter of an award for this year, because there would not be time for a study to be made and recommendations given to the House on the men deserving of the award. This was read in the report of the Council, and I presume that the members listened to the recommendation of the plan as presented by Dr. Lukins, and the plan itself was outlined very carefully in its presentation by Dr. Vance. I presume there is no reason to take it up item by item unless there should be a motion to that effect for its consideration. It was very carefully worked out by Dr. Lukins and very carefully gone over, individually, by the members of the Council. It was mailed to the members of the Council before they went into session, and they went over it very carefully. The first copy that was sent out received some revisions on recommendations of individual members of the Council and, after due consideration by Dr. Lukins, there was some rearrangement of the recommenda-

tions as to the conditions under which awards would be made. I feel, and I think I am speaking for the Council, Dr. Vance, that probably nothing has been given more serious consideration in the study of a plan than the Council gave to this. Unless someone wants it analyzed more than you got in the reading this morning, I am going to recommend, for that particular item of the report on the Council, the adoption of this plan of awarding a medal to some outstanding man each year who is a member of this Association.

The motion was seconded by Dr. Vance.

J. B. Lukins, Louisville: Before we vote on it, I would like to have this thoroughly understood. I think the expression "outstanding man" probably conveys a little different idea than the Council had in mind. The humblest practitioner from a crossroads place in Kentucky can be nominated for this award just as well as the most renowned specialist in the state, because it says "individual practice." It also says "medical research," and it says "medical teaching." It says all that, but you don't have to qualify in all of these. Dr. Smith can nominate Dr. Jones, and Dr. Jones can nominate Dr. Brown, and so on, if you think he is worthy to be considered; because it doesn't make any difference whether we are outstanding before the world or not, it is how we do our job. It doesn't make any difference whether it is private practice, whether it is medical research, whether it is medical teaching, or whether it is in some well-known specialty; any man who is a member of the Kentucky State Medical Society is eligible to be nominated for this medal. The details of the medal are not yet determined, but it is to be a medal well worth while. This is nothing to be given haphazardly. Whoever gets it is going to really deserve it in the estimation of the Council, and I hope that every Delegate will understand the details of this and feel free to ask any questions that he wants to ask. We hope there will be somebody in the state worthy of this medal each year.

Secretary Blackerby: I believe it is the understanding that the recommendations be made to the Council, and the Council make the recommendation.

J. B. Lukins: That is right. Any doctor may write to Dr. Vance, nominating someone.

John Scott, Lexington: May I ask the committee, or Dr. Lukins for the committee, to give some reason for the attempt to select the most outstanding man in the profession each year?

J. B. Lukins: The American Medical Association gives a medal each year, so does the American Public Health Association, the Southern Medical Association gives a medal each year, and many of the State Societies do the same thing. The plan, as worked out and as adopted by the Council in our state, if it is adopted by you, is not identical with any of these plans; it may be identical with some of the state plans, but I am not familiar with the state plans. The real reason for it is to spur each and every one of us to be a better doctor, to be more studious, to render better service, to be more unselfish, and to try to help humanity.

O. O. Miller, Louisville: I think it is time that we recognized the merits of our own profession. If we don't do it, no one else will, and I think this is an eminently fair plan in that it will give every man an opportunity to be honored by his Association. It covers the humblest practitioner, and I think he is the man who makes the real contributions to life. Only last year, one of the profession in the State of Kentucky, E. T. Riley, Frenchburg, was written up in *Time* magazine. He was the health officer of his county, and he represented the profession in three or four different activities in his county. I think that that gentleman would have qualified.

I do have some objections to the terminology. They are purely technical, however. They say it should be an annual "affair." I prefer to say that it be an annual "presentation." Instead of saying in the text that if in any one year the Council so desire, they may skip it, I would suggest that if in any year the contributions of the nominees are not considered sufficiently meritorious to warrant the award, then such award shall be withheld.

Smithfield Keffer, Grayson: I would recommend that the man in the state who has performed the most meritorious service in the year just preceding be awarded this medal by the Councilors, and any member of the Association may nominate anyone he chooses. Then you vote to let us select one every year; we leave it up to your wisdom to say which one that will be. I don't care whether it is extremely meritorious or not. You

might deserve a meritorious medal because you did one thing. You might have stopped some wild man from running over a baby. I think that would be worth a medal. If we get these fellows so good, after a while they are going to run so fast when they come to a turn they will get out of the road. I would like to offer the suggestion that will grant a medal each year to the one man in the state who has done the most meritorious thing.

JOHN SCOTT: As I understand it, it has for its purpose spurring the effort of each man to be a better doctor. I would like to say that I think anybody whose efforts are spurred by any such idea as this would certainly not be the highest class doctor to start with.

L. H. SOUTH, Louisville: I have had occasion to write to the various State Medical Societies, the American Medical Association and the American Public Health Association regarding the type of medals they give for distinguished services, and if the Committee is interested in seeing these photographs, I will be very glad to turn over this correspondence to them. I have a very interesting medal about the appropriate size that was given me by the National Institute of Social Science, the die for which was made by the famous sculptor Malvina Hoffman. I have a photograph of this on file with the other pictures and I will be very glad to give this to the committee on awards.

PRESIDENT PRITCHETT: I had the privilege of looking at this first draft relative to the giving of a medal, and I am quite sure, Dr. Scott, that the idea of Dr. Lukins and Dr. Vance and the Council, was merely to award where merit is due, which, in turn, might stimulate to greater endeavor. Sometimes when you have a spirited pony he can do better if you get him under the whip, with a little encouragement. Whether it is the youngest man in the profession, some teacher in the hospital, a public health man, or some man up in the mines who has performed wonderful work, he would be eligible. It is no cheap thing, it is no cheap honor, not cheaply given, not politically-mindedly given. It is to be given after due consideration of the Council and they can throw it out if necessary, and not give one for two or three years. If one is deserving of the honor, he will be the man.

Is there any more discussion along any other line of this report?

MAJOR W. B. ATKINSON, Campbellsville: I move the adoption of the report as a whole.

The motion was seconded by Smithfield Keffer and carried.

PRESIDENT PRITCHETT: Report of the Committee on Publicity, Dr. Cawood.

REPORT OF COMMITTEE ON PUBLICITY

CHARLES D. CAWOOD, Lexington: The Publicity Committee is composed of Drs. John G. Clem, Louisville; B. H. Hollis, Louisville, and myself. We can assure you at this time that your publicity will be adequate and your meeting will be covered.

PRESIDENT PRITCHETT: Report of the Committee on Technical Exhibits.

REPORT OF COMMITTEE ON TECHNICAL EXHIBITS

J. M. BLADES, Butler: As you know, each year we have a series of technical exhibits. As you pass back and forth through the hall, you will notice them. As you go and come through the hall, you will find twenty-three technical exhibits. These exhibitors have gone to considerable expense to present for your convenience this display of their work. All of them were in on time, and those who have stopped and seen them seemed well pleased. Stop as you go or come, buy if you want, or say "howdy," and make them feel better by your inspection.

J. B. Lukins, Chairman
J. M. Blades
Virgil Kinnaird

JOHN SCOTT, Lexington: I move the adoption of the report.

The motion was seconded and carried.

PRESIDENT PRITCHETT: Report of the Committee on Public Health Problems in War, Hugh R. Leavell, Louisville, Chairman.

REPORT OF COMMITTEE ON PUBLIC HEALTH PROBLEMS IN WAR

HUGH R. LEAVELL, Louisville: The past year has seen an accentuation of previously existing problems, more than the development of new ones, in the relationship of public health in Kentucky to wartime activities. The principal difficulty has been that of trying to do a bigger job than ever before with fewer workers; which is a situation certainly not restricted to the public health field.

The war-related problems have resulted from the establishment of military camps and hospitals in areas not previously made ready for such concentrations; and shifts of large numbers of peo-

ple from rural areas to work in war plants where the workers and their families have had to live in overcrowded housing conditions. In some sections enormous new industries have been set up, employing hitherto unknown industrial processes which have created unexpected hazards. In certain sections of the state, where medical care of the indigent is a responsibility of the public health authorities, the difficulties in providing this care have been great, even though the proportion of the population falling in the indigent class has fortunately been materially reduced. In all portions of Kentucky, the shortage of physicians and of nurses has had at least an indirect effect on the public health departments. We have had the novel experience of having to tell people what they would have to do if they could not reach a doctor, instead of stressing the importance of obtaining medical services at the first sign of illness and encouraging periodic health examinations. Affecting especially the central state office has been the unprecedented demand for birth certificates, which has perhaps given many people for the first time a realization of the importance of having their births properly reported. Civilian defense activities have been less intensive in the past year than previously, but still time-consuming in the more critical areas. The labor turnover in food-handling establishments, dairies, and other plants subject to health department inspection, as well as the shortage of critical materials and equipment necessary for the proper operation of such establishments, have multiplied the problems of maintaining desirable sanitary conditions throughout the state.

The grave problems created by the death of Dr. A. T. McCormack who had so long and so ably led the public health workers in Kentucky, has been less serious than it would have been had not Dr. P. E. Blackerby stepped into the breach in a way which has endeared him to us more than ever before.

Public health workers in this state have learned to turn disasters, difficulties, and emergencies to good purpose; and the present situation is no exception. Many valuable things are coming out of this war in the public health field. With the establishment of a Bureau of Industrial Hygiene for the first time we have begun to meet a large and increasing need in an aggressive manner. The Selective Service examinations have proved extremely valuable in finding hitherto undiscovered cases of venereal disease and of tuberculosis, as well as in giving us a good cross-section picture of the health of Kentuckians, which we find to be in need of considerable improvement. With the cooperation of the military authorities and the U. S. Public Health Service, venereal disease is being attacked more effectively than ever before; and since new methods and centers for rapid treatment are being made available, it is reasonable to expect prompt and definite reductions in these diseases. The importance of proper nutrition is becoming more widely recognized; and many of our people are learning that we need something more than good southern cooking to secure a proper diet, fortunately, we need not give up the best features of our southern cooking to secure it.

Kentucky seems to be awakening, better late than never, to the need of proper provision for the diagnosis and care of tuberculosis. Your committee feels that this movement should receive all possible support from the medical profession of the state, and that influential persons in all areas should have their interest aroused and maintained, to the end that the necessary financial support will be forthcoming.

The Emergency Maternal and Infant Care Program of the Federal Children's Bureau is meeting a serious need for the wives and children of service men more effectively than many persons expected at the outset. Its success is due, in large part, to the fine cooperation of the medical profession and hospitals throughout the state; and it has undoubtedly done much to improve the morale of men in the Armed Forces, since they can be assured of necessary care for their families left at home.

The shortage of available county health officers, public health nurses, and other personnel has prevented extension of full-time public health services to some counties which have requested such service. It has also necessitated the combination of two or three counties into a single unit in a number of instances. It is quite possible that such combinations may be very desirable in the future administrative organization of public health work. A committee of the American Public Health Association has recommended, and the idea has been endorsed by the American Medical Association, that local health departments

should serve an area with sufficient population and resources to give at least minimal financial support to the local unit. Many of our counties are too small alone to provide even the essential minimal support. However, through combinations with neighboring counties, the objective can be achieved readily in a jointly-supported health department.

Many war-related problems, such as those of the returning veterans and the tropical diseases they may bring with them, are only beginning. We shall undoubtedly have to continue our work under difficulties for some time to come; and those of us in the public health field realize fully that we can do an effective job only if past and present cooperation of the private practitioners of medicine continues in the future.

Gregg Morgan,
Mount Sterling
Bruce Underwood,
Morganfield
Hugh R. Leavell,
Louisville, Chairman

ROBERT SORY, Richmond: I move the report be adopted.

The motion was seconded and carried.

PRESIDENT PRITCHETT: The next report is that of the Committee on Medical Education.

ERNEST BRADLEY, Lexington: I have the committee's report on Medical Education, which was written by Dr. Marvin Beard, Chairman. He and Dr. Frank Simon and I were members of the committee. I did not meet with the committee, but they met with Dr. John Walker Moore, who was the Committee Consultant, and this is the report:

REPORT OF COMMITTEE ON MEDICAL EDUCATION

Your Committee on Medical Education has given considerable thought to the coming problems of refresher courses for our returning Service doctors. We believe that this Association should cooperate fully with the national associations in this matter. The American Medical Association and other national organizations are at work on plans for this purpose, and as soon as a definite program is set up, this Association's part in that program will be announced.

Your committee would call attention to the serious threat to the supply of physicians for civilian medical care in the post-war period, through the rejection by Selective Service System of a plan to grant deferment of any premedical students or medical students not registered before July 1, 1944, thus limiting the number of new registrants for these courses to women or male premedical students rejected because of physical defects. Request had been made for deferment of six thousand annually, as a necessary quota to assure a continuing supply for the medical schools of the country. In order to remedy this situation, a bill has been introduced in Congress by Mr. Miller of Missouri, to amend the Selective Service Act to authorize the deferment of such a quota, and we are requesting the Resolutions Committee to offer a resolution in support of this Act.

Marion Beard, Chairman
Frank Simon
Ernest Bradley
John Walker Moore, Consultant

The resolutions that go to the Resolution Committee are not to be read.

SECRETARY BLACKERBY: I move the report be approved, and the resolution be referred to the Resolutions Committee.

The motion was seconded and carried.

PRESIDENT PRITCHETT: Report of the Committee on Medical Ethics.

SECRETARY BLACKERBY: Dr. T. Atchison Frazer, a member of the committee, handed this to me and asked if I would read it for him.

REPORT OF COMMITTEE ON MEDICAL ETHICS

During the several years it has been our privilege to serve on your Committee on Medical Ethics, no instance of violation of the rules governing the conduct of any member of this Association has been brought before this committee. We consider this an outstanding achievement and wish to compliment the Association.

We do not feel that we are intruding when we take a few moments of your time again to call to your attention some of the fundamental principles governing the right conduct of members of the Kentucky State Medical Association.

The Principles of Medical Ethics, as adopted by this Association, is but a statement of the underlying principles of conduct which apply to the relation of every physician with his patients, with the public and with his fellow practitioners of medicine. The principles are not laws to govern actions in detail but to guide conduct. The basic principle underlying all ramifications of a doctor's professional life is stated in the opening

sentences of the published Principles of Medical Ethics: "A profession has for its prime object the service it can render to humanity; reward or financial gain should be a subordinate consideration. The practice of medicine is a profession. In choosing this profession, an individual assumes an obligation to conduct himself in accord with its ideals." That has been the basic principle of medical ethics since the time of Hippocrates. Medicine's methods may change, its economics may change, its science may change, but its principles of ethics do not change. Government and law may disrupt and negate the operation of our Principles of Medical Ethics for a time or in part, but it always will remain the principles of right conduct for our profession and will prevail just as long as government and law permit.

Respectfully submitted,
T. A. Frazer
Karl D. Winter
Guy Aud, Chairman

SECRETARY BLACKERBY: I move its adoption.

The motion was seconded by J. W. Stovall and carried.

PRESIDENT PRITCHETT: Next is the report of Dr. W. E. Gardner, Louisville, of the Advisory Committee to the Director of Hospitals and Mental Hygiene.

REPORT OF ADVISORY COMMITTEE TO THE DIRECTOR OF HOSPITALS AND MENTAL HYGIENE

W. E. GARDNER, Louisville: I move that Dr. A. M. Lyon, the Director of Hospitals of Mental Hygiene, who is in the audience, be permitted to supplement the report or discuss it in any way that he sees fit.

A meeting of our committee was held with the Director of Hospitals and Mental Hygiene in Louisville, on August 2, 1944, at which all members were present, except one; also attending the meeting were Dr. James H. Pritchett, President of the Association; Dr. Oscar O. Miller, President-Elect; and Dr. Charles A. Vance, Chairman of the Council. The new Commissioner of Welfare, Mr. Quertermous, had been invited and expected to be present, but was prevented from doing so on account of the death of a close personal friend.

After informal discussion of several matters related to the Division of Hospitals and Mental Hygiene, Dr. Lyon briefly reported some of the progress which had been made in the rehabilitation of old buildings and the purchase of new equipment at the various state hospitals. He also spoke at some length regarding future plans of the Division to carry forward an extensive mental hygiene program in Kentucky as funds and facilities become available; and again referred to present difficulties in the hospitals related to limited professional personnel. Our committee, in its report last year, took cognizance of this difficult situation and paid tribute to Dr. Lyon and all of the superintendents for their unusual patience, splendid foresight, and conspicuous teamwork, especially during the period of rebuilding, with all of its inconveniences of crowding and shifting of patients from one building to another.

A few days previous to our meeting, there had been published a brief Associated Press dispatch from Frankfort, in which Dr. Lyon was quoted as follows: "It is very evident that the entire group of laws which have been passed relative to the mental hygiene program should be discarded and re-enacted to meet the needs created by progress." It was assumed by our committee and agreed to by Dr. Lyon, after calling attention to this news item, that he had particular reference to the commitment laws and those related to the care of pauper idiots, and not to the broad provisions of the Chandler-Wallis Act which was passed by the Kentucky General Assembly in the spring of 1938, and which was based upon painstaking studies and the advice of creditable representatives of the National Committee for Mental Hygiene and the U. S. Public Health Service. In order that we may not be misled by such brief quotations from more inclusive statements, which have been made by Dr. Lyon from time to time, it would seem appropriate this year to again briefly review the actual language of the Chandler-Wallis Act in reference to the functions of the Division of Hospitals and Mental Hygiene, which are as follows:

> **The Division of Hospitals and Mental Hygiene under the direction of the Department of Welfare shall be charged with the administration of all state institutions for the care and treatment of the mentally diseased and feeble-minded persons. This Division shall also be responsible, in cooperation with the State Department of Health, for the development of a State-wide mental hygiene program looking toward the prevention of mental disease and post-**

institutional care of persons released from state and/or mental institutions. In addition, the Division shall be charged with the supervision of the Red Cross Hospital and Home for Incurables in Louisville, as well as of privately owned mental hospitals which are in receipt of State aid. In addition, the Division shall be specifically charged with the following responsibilities:

(a) Co-ordination of all existing facilities for medical and psychiatric care and treatment.

(b) Creation of other facilities for these purposes as needed.

(c) Custody, care, and medical and psychiatric treatment, with administrative proceedings incident thereto, of inmates in all institutions for the insane, feeble-minded, drug addicts, chronic inebriates, or any other persons who are now or who may hereafter be legally adjudged as of unsound mind *or non compos mentis*.

(d) General supervision of the conditions under which the pauper idiot acts shall be carried out with the proviso that no person shall receive any pauper idiot into his home without a permit from the Division of Hospitals and Mental Hygiene.

(e) Supervision of medical and psychiatric service to all penal and correctional institutions.

(f) Supervision of medical and psychiatric services in institutions, maintained wholly or in part by the Commonwealth of Kentucky for the care of dependent children which are now or may hereafter be under the supervision of the Department of Welfare.

In addition to the above, you are familiar with the method of appointment of the Director of Hospitals and Mental Hygiene, after nomination by the Council of this Association.

It is noted that the above provisions for the establishment of a comprehensive program for mental hygiene in Kentucky, both preventive and curative, have already been enacted. Is it new laws, therefore, that we should now endeavor to seek as remedial measures for an unfinished program which has been beset with many difficulties on account of the total war situation, or should we rather make a more realistic evaluation of the mental hygiene laws which we have, and then formulate plans for their better application to the problems at hand? We believe the present laws are adequate for most of Dr. Lyon's so-called "Eight Point Program," which has been given some publicity, as well as for the six recommendations which he later made in his broadcast from the University of Kentucky studios on May 27, 1944. Our committee would look with disfavor upon any effort to re-write the essential provisions of the Chandler-Wallis Act which may be a bunglesome law from the standpoint of political patronage, but which we believe to be a good law from the standpoint of the state hospitals and other phases of mental hygiene in Kentucky.

In closing, we should like to state that we do not wish to imply from any of the foregoing statements that there has come to our committee any intimation of political tinkering with the Division of Hospitals and Mental Hygiene; and although we have not been asked, up to this time, by higher authorities of the present State Administration for advice regarding future plans of the particular division of the Department of Welfare in which we are interested, we have been assured by Dr. Lyon that Governor Willis and Commissioner Quertermous desire to cooperate with the State Medical Association in its efforts to help improve the facilities and services of the state hospitals, in addition to helping promote an adequate and state-wide mental hygiene program.

Respectfully submitted,
Irvin Abell
P. E. Blackerby
E. B. Bradley
W. E. Gary
C. C. Howard
E. M. Howard
W. E. Gardner, Chairman

I move the adoption of this report after Dr. Lyon or others have discussed it.

A. M. Lyon: I appreciate very much the many good things Dr. Gardner said, especially relative to not rewriting the whole law. I can say to you gentlemen that, as far as I have been able to find, the Kentucky State Medical Association gives more attention and has more interest in the care of the mentally ill than any other state in the Union. That is very pleasing to the fellow who is struggling with the problem and does, from time to time, give us some inspiration.

I think it is probably advisable at this point to mention one law that we had passed this last session relative to the care of the mentally ill. It was points like that law that I had reference to when I said that the statute should be rewritten. Of course, I had in mind at that time particularly the commitment of persons mentally sick to the institutions. As

you now know, they are placed in the institutions as you place criminals in penitentiaries, and I do not think they deserve such handling.

In this last session of the Legislature, a law was passed which had to do with persons who had gone to other states and become mentally ill and had to be returned to Kentucky. To illustrate what I mean, during wartime, suppose that an individual went from Pike County, let's say, to Detroit and was employed there, and under the stress and strain becomes mentally ill. The Michigan authorities would immediately contact the Division of Mental Hygiene and say, "We have Miss So-and-So, or Mr. So-and-So, who has become mentally sick and new needs to enter the hospital, and we think that she or he is a ward of Kentucky and should be cared for by Kentucky." Under the old law the procedure was that we contact the county court of the county in which he or she lives and get assurance, or confirmation, rather, that he or she was a legal resident of, let's say, Pike County; then we could authorize the return of the patient to Pike County.

Suppose that it was a woman and that the return was made to Pike County on Saturday afternoon, and the county court would not be in session, and the judge would say, "Well, put her in jail and I'll try her Monday morning." You can imagine what would happen to a mental case placed in jail and held over two days.

We want to relieve that situation, and we asked the Legislature to pass a law whereby we could authorize a direct transfer to the hospital, for instance, to Eastern State Hospital, and then let the Superintendent of Eastern State Hospital and the Clinical Director make affidavit to the county court of Pike County and the case then be committed from those affidavits and the patient never subjected to the long trip, additional expense, and probably placed in jail. Those were some of the conditions that I had in mind when I said that the law should be rewritten.

Mental health is as essential as is physical health. In order to give you an idea of the mental problem in Kentucky, let me give you a few facts. One out of every twenty persons now living has been, is now, or will be a patient of a mental institution before he or she dies. That would indicate that of the twenty-four million school children now in the United States, one million of them must spend some time in a mental institution before he or she dies. One of the authorities in the field of mental health said a few days ago that it had been pretty well proven that there would be more of the children now in the elementary schools, a greater number of those children, in a mental institution before they die, than of those who would get college degrees. In order to get the picture more definitely before you, every passing day of the year in Kentucky there enter the mental institutions of Kentucky six people. Of the six people who enter these institutions, on an average, 25 per cent of them are above 65 years of age, 25 per cent are below 31 years of age, and of the six that enter, one is under 25 years of age. That happens in Kentucky.

It might be interesting to get this picture—that for every individual who is sent to a mental institution, certainly at least ten people are vitally concerned. That being the case, last year 22,250 people were vitally concerned; and any condition that would involve 22,000 Kentucky people certainly deserves some consideration.

I have here the Eight Point Program that is too long for me to read, but I think I shall submit it for publication if they want to do so.

In this Eight Point Program, I think we have incorporated everything that would be needed for the present, at least, to better solve the mental problem in Kentucky.

I know you are interested in the physical improvement of the institutions, and I can say to you gentlemen that more has been done in the last two and a half years in the physical plants for the care of the mentally ill in Kentucky than has been done in the preceding fifty years. In order for you to have some little idea, I will not detail the various physical improvements that have been made, but take Eastern State Hospital as an example. When the contracts now under construction are completed, 95 per cent of the white patients of Eastern State Hospital will be in new or rehabilitated quarters and half of those quarters have been made fireproof. That ought to give you some idea. There are many things that have been too numerous to mention.

At Central State Hospital, when the contracts now under construction will have been completed, at least 60 per cent of the population of that institution will be in new and rehabilitated structures,

half, or at least two-fifths of which have been fireproofed.

There is being constructed at Central State Hospital at the present time, to be completed in the course of some few weeks, a four hundred-bed dormitory for the care of colored patients; this is fireproof and modern in every respect. There have been constructed at Central State Hospital nurses' quarters that will house one hundred employees.

Those are just some of the major things that have been done.

Western State Hospital, now under construction and rehabilitated, will be able to take care of some 40 per cent of the cases there. I might mention also that one of the difficulties we had down there at Western State Hospital was the question of water. There has recently been installed a new filtration plant, a modern plant that will take care of the institution for many years to come, and an increase of the raw water supply of thirty million gallons or more. There has been equipment bought and therapeutic measures instituted, but we, as all other organizations, are handicapped for personnel. We sorely regret that we do not have even half enough doctors to meet the minimum standards, but those doctors and those attendants are doing a good job. Every passing day four patients are returned to their homes.

Even with our limited and let's say, disrupted program because of change in personnel so often (in one instance the personnel changed more than 100 per cent in a year), with the installation of a record system some three years ago, the patients that were sent home last year were sent home five months earlier per patient than they were three years ago. The ones who had to return stayed out a month longer than those three years ago. So, with that result, with limited personnel, it is very evident that we can do more with a full, complete personnel.

The mental institutions of Kentucky have been operated for one hundred and twenty years. The buildings are from one to five stories high, and I know you will be chagrined to know that not until this year was there an elevator in any mental institution in Kentucky. The patients climbed five flights of stairs. Now elevators are being installed.

I want to give you some specific recommendations from my annual report:

1. Continuation of reconstruction and new building program.

2. Purchase and installation of hydrotherapy equipment in each mental institution.

3. Construction and equipping of a receiving and treatment center at each of the mental institutions.

4. Increase the personnel staff to the minimum standards set by the American Psychiatric Association, which would mean an increase of at least 100 per cent in the professional personnel of each of our mental institutions.

5. Establish a nurses' training school at Central State Hospital.

Those are specific recommendations that I made to the committee.

There are many other things that I would like to mention to you, but you have been so gracious that I will just ask that you all visit the mental institutions every time you can. It will inspire those of us who are trying to do something about it, and your suggestion is always respected.

Robert Sory, Richmond: I move the adoption of the report.

The motion was seconded and carried.

W. E. Gardner, Louisville: I would like to make a motion that Dr. Lyon's Eight Point Program be published in the Journal, inasmuch as he did not have time to include it in his discussion, leaving it to the discretion of the editors as to whether or not it be published in connection with this discussion or independently. I think it would be well to make publication of it in our Journal even though it has been given to the newspapers.

I would like to say, furthermore, that our committee would like to commend Dr. Lyon not only for the fine way in which he has carried on in his position as Director of Hospitals of Mental Hygiene, but especially for the very favorable publicity that the committee has been able to get through his leadership.

Ernest Bradley, Lexington: I second the motion.

President Pritchett: The motion to incorporate the Eight Point program in the Journal is ready for your action.

The question was put to a vote and was carried.

Mental Hygiene Eight Point Program Recommendations for Kentucky

I

A. M. Lyons, Frankfort: One of the most pressing needs in Kentucky in the field of mental health is an educational program to acquaint the public with the value to be derived from a comprehensive attack on the problem of mental illness

and emotional instability through mental hygiene administered on a state-wide scale.

Such a program should stress the efficacy of prevention as compared with treatment. We have been prone in the past 'to build for and house' the mentally ill and have put forth but little if any effort to prevent mental illness. Many of our hospital cases need never have 'broken' mentally had they been recognized in childhood as potential mental problems and the proper training been given them.

It would also involve preparing teachers and prospective teachers to recognize personality difficulties which lead to later mental illness. Incidentally, such training might, as a by-product, cause teachers to take stock of themselves and thus help remove some factors which help the children develop emotional irregularities, thus preparing a fertile field for later neuroses or psychoses.

II

Psychoses (insanity spoken of in legal terms) have long been handled by the courts much in the same manner as criminality. The patient is known as the defendant, and he has a counsel whose duty it is to defend his rights; that is, to prevent his being sent to a hospital unless he is in need of treatment, which need is determined by a jury, no member of which, in general, knows anything whatever, or but little at best, about mental illness. Once one has been adjudged 'insane,' legally he so remains until the same court says he has recovered, even though every psychiatrist in the state had been saying for a year that he is no longer mentally ill. Not only must we regard mental illness as a 'sickness,' but we must not frown upon it as a stigma. In light of the above, it has become essential that the mentally ill be recognized as such, and their consideration be removed from the field of criminality and placed in that of psychiatry. General practitioners, unless qualified in psychiatry, should be permitted to recommend observation of a subject by psychiatrists in a receiving center at one of the state mental hospitals, but should not label the person as mentally ill and in need of hospitalization. This should be done only by psychiatrists at the receiving centers after observation sufficiently long to make possible a definite decision.

III

While much physical improvement has been made in our state mental hospitals within the past few years, one could say they are now only approaching the needed facilities for good custodial care. The necessary means for adequate treatment must await additional building and much equipment. When such construction is begun, space should be included for modern facilities for improved therapeutic treatment, especially by physiotherapy, hydrotherapy, and occupational therapy. There has been, due to the present war conditions, no personnel improvement commensurate with the physical improvement. The elimination of this deficiency has, then, become one of the important problems to be solved as soon as possible. The professional staff, both resident and consultant, needs to be increased greatly. The social service program must be expanded to the point where it will not only provide the information so essential in diagnosing, treating, and paroling patients, but will be able also to render valuable assistance in a statewide program of mental hygiene. It is needless to say provisions should be made to attract not only better-trained attendant personnel, but provide a training program, for no mental hospital can rise much above the general level of those whose duty it is to care for the patients day and night.

IV

A state-wide mental hygiene program must have as one of its goals the rehabilitation of those whose mental condition has caused them, even though never really breaking mentally, to become socially maladjusted. Since many of these ultimately are confined in our penal and correctional institutions, it becomes essential that psychiatric and psychological service be provided each such institution, to the end that the parole board is not forced to shoot in the dark and trust to luck. To give 'serve out time' to a short term prisoner whose emotional instability or mental condition renders him unfitted for social adjustment, is of no service to the prisoner and practically none to the state. In fact, it may be a disservice to the latter, for the relief to the community, through a short extra period of segregation of the prisoner, probably will be more than equalized by further social deterioration on his part, contingent upon his added incarceration, without the above-mentioned services.

V

A certain per cent of our population are too lacking in intellectual capacity to

profit much from intensive or prolonged academic work. The schools have recognized this and have, in many cases, met the problem by passing these children from grade to grade to keep them with the group of their own age and size. The practice is justified by saying the children will be kept off the streets and will gain something from sitting in the class. Even if this were true, it would be an enormous waste of time, for the children would be gaining but little that would help them to be self-sustaining. They cannot be expected to go through life merely watching others work and be tolerated by or be of any service to society in such a role. Since they cannot comprehend the discussions in the classes and must necessarily be left out of the main activities, the daily procedure inevitably must become boring. Since we tend to avoid that which produces ennui, it is but natural to expect such children to become truants or disciplinary problems. Since these children constitute a part of society, is it too much to expect our educational system to make provision for training them in the things they can comprehend and which will enable them not only to make a living, but also to live in harmony with other members of society? It probably will cost more to keep one incarcerated later for antisocial behavior than to train him for social adjustment and to maintain an independent existence. The practice of passing children along, while it may make life a little easier for the schools, is, at best, an escape mechanism and frequently is absolutely vicious in its effect on the children. In fact, it provides a wonderful incubation period for juvenile delinquency and emotional instability. Children of mental caliber, mentioned above, do have interests which can be guided into channels which will be profitable to them and to society, but this will never be achieved through academic training or promotion by size.

VI

During the past, Kentucky's hospital and mental hygiene laws have developed piecemeal. The result is a rather confused and confusing group of statutes, the wording of which is often ambiguous and the interpretation of which is very difficult. When one considers the above, it becomes axiomatic that another problem of paramount importance in furthering the mental hygiene program in Kentucky is a thorough revision of the statutes relating thereto. Though the need for a thorough statutory revision has been indicated, the situation involving the pauper idiot should be mentioned in more detail. The law states that when one is adjudged by a circuit court to be an idiot and a pauper an allowance can be made for his care. It is so certified to the State Department of Finance, and this certification authorizes said Department to pay a committee, which has been appointed by the county court, the allowance from an appropriation from the State Department of Welfare. The amount to be paid by the state is not to exceed thirty-seven dollars and fifty cents ($37.50) annually, which amount is matched by the county. The total sum, not to exceed seventy-five dollars ($75.00), is paid as follows: The state pays its part in one sum at the end of the year. The county does likewise in some cases, but in others the payments are semi-annually or quarterly. The total allowance, by its needs, must be increased. One statute says that before any home may receive a pauper idiot into it, permission to do so must be given by the Division of Hospitals and Mental Hygiene, but since no funds were made available to carry out this provision it was, in effect, nullified. An inquest must be held in each case every five years, if the allowance is to continue. This is essentially the only safeguard for the state's funds, for no accounting to the state is required of the committee. In many instances the committee is not in any way qualified to care for feebleminded children. This being true, the problem can hardly be said to be receiving attention, with proper supervision provided or in accordance with an acceptable mental hygiene program.

Since the statutes place on the Division of Hospitals and Mental Hygiene the responsibility of developing and supervising a state-wide mental hygiene program, it is evident that the general procedure now followed relative to care of the pauper idiot should be changed by legislation and made a part of the total problem of feeblemindedness, under supervision of this Division. Certainly is this true if the handling of "pauper idiots" is to be brought from the pit of ridicule to the semblance of a "boarding out" plan which has been proven by other states to be very satisfactory and effective. The "boarding out" program should include not only the pauper idiots, but also any indigent person who is helpless and

harmless, regardless of whether the condition is due to mental defectiveness, mental illness, or physical handicap.

VII

Though the Kentucky Statutes state the epileptics may be segregated, so far no provision has been made for such. The result is that they are mixed with other patients in all the mental institutions. Approximately 10 per cent of the population of each of our state mental institutions are epileptics, and a somewhat smaller per cent are in the penal and correctional institutions. It is true that in some cases a psychotic condition is superimposed upon the epileptic state, but many of the individuals are suffering from epilepsy alone. Medical science has made some progress in the care and treatment of epilepsy and needs additional facilities for further expediting the prosecution of extensive and intensive study to the end that, through the process of elimination, this malady can be more thoroughly 'cornered.' With this in mind, it is becoming increasingly essential that provisions be made for segregating the epileptics for care, treatment, and study.

VIII

Many inmates in our state penal and correctional institutions are, by virtue of their mental deficiency, unable to profit by incarceration in such institutions. Society's problem with or responsibility to such persons is not one of punishment or rehabilitation. It is, rather, one of permanent segregation for the welfare of both prisoner and society.

In the light of the above, it is evident that there should be established a state institution to care for *defective delinquents*. If placed in our present penal or correctional institutions, they are usually returned to society as a greater problem than before their commitment and often become recidivists to the extent of habitual criminality. On the other hand, if they are committed to our present institution for the feebleminded, they contaminate and disrupt the training of those defectives whose habits have never become antisocial in nature. The defective delinquents need the training and security that can be provided only by an institution established and operated for that purpose.

PRESIDENT PRITCHETT: Report of the Committee on Tuberculosis, Dr. Paul A. Turner.

REPORT OF THE COMMITTEE ON TUBERCULOSIS

PAUL A. TURNER, Louisville: This committee was first appointed by Dr. E. M. Howard, 1943 President of the Association. The relatively short time prior to the October meeting of the Association was not sufficient for the committee to formulate a report to be presented at that time. The object of the committee, however, was stated as follows:

> **To create a better understanding among both the medical profession and the laity of the modern concepts and advances made in the prevention, diagnosis, and treatment of pulmonary tuberculosis.**

The first meeting of the committee was held January 8 of this year, and a number of tuberculosis problems pertaining to the state were studied and discussed. At that time the late Dr. Virgil E. Simpson was on the committee, and it was largely through his advice that the committee policies were formed. We take this opportunity to express our deepest sorrow at his passing, which deprives us of the exceptional aid which he so unstintedly gave not only to this committee, but to all medical organizations which so frequently asked for his assistance

This first committee decided to hold meetings for the medical profession and laity in each Councilor District as soon as war conditions would permit, in order to help carry out the objects of the committee. It was also decided to hold a joint scientific meeting of the chest specialists of Indiana and Kentucky to discuss various tuberculosis problems. No meetings in Councilor Districts were held because of transportation difficulties. The joint meeting of the tuberculosis specialists, however, was held in Louisville, and thirty-five specialists attended. Guest speakers were Dr. J. Winthrop Peabody, of Washington, D. C., and Dr. David Heusinkveld, of Cincinnati, Ohio.

At the time of the committee meeting, House and Senate Bill No. 7 had been introduced into the Legislature, and these bills naturally came up for discussion. It was pointed out by the late Dr. Simpson that these bills required that the Legislature appropriate funds for the erection and maintenance of three tuberculosis sanatoria, the building and operation of them to be placed under the jurisdiction of the State Department of Welfare. He

discussed at length these sections of the bills, pointing out the necessity of building the sanatoria, but questioning as being appropriate the placing of institutions under the Department of Welfare. The entire committee then heartily endorsed the object of the bills in creating additional sanatoria, but felt that it was desirable to provide for their administration by an official agency maintained under the sponsorship of organized medicine to insure the best scientific supervision and control. This advice of the committee was transmitted to the secretary of the State Medical Association, with the request that it be presented to the Council of the Association. As you know, these bills did not pass the Legislature, as House Bill No. 147 was later introduced and was a more comprehensive measure. May I state here that chiefly through the efforts of Dr. C. C. Howard this bill eventually became law, as it was incorporated in the appropriation measure passed by the Special Session of the General Assembly.

Through the ensuing months, members of the committee individually discussed with the Chairman many of the tuberculosis problems, and at a recent meeting of the entire committee problems were reviewed. The committee at the present time, as appointed by Dr. Pritchett, now President of the Kentucky Medical Association, is composed of the following members:

Dr. Benjamin L. Brock, Tuberculosis Controller, Louisville and Jefferson County Health Department;

Dr. Maurice G. Buckles, Tuberculosis Specialist, Louisville;

Dr. Palmer H. Reed, Internist and Tuberculosis Specialist, Paducah;

Dr. Russell Teague, Director, Division of Tuberculosis, State Department of Health, Louisville; and

Dr. Paul A. Turner, Hazelwood Sanatorium, Chairman.

This committee endorsed the policies of the previous committee and decided that it should present to the State Medical Association certain advice in regard to provisions which they think should be adopted in order that tuberculosis may eventually be eradicated from Kentucky. It is felt that the term "eradication" may be used instead of the word "control." The word "eradication" was used by Surgeon General Thomas Parran when he addressed the National Tuberculosis Association this year. We, therefore, believe that the Public Health Service will use every endeavor to war on tuberculosis in the same manner that in late years they have used in the war against syphilis.

Financial aid, of course, will become available, probably in increasing amounts within the next few years, because of the recent law enacted by the Congress of the United States. For the present fiscal year $10,000,000 has been authorized, and it is confidently expected that Congress will appropriate this sum in the next deficiency appropriation.

Dr. Herman E. Hilleboe recently has been appointed Chief of the new Tuberculosis Division of the United States Public Health Service, with the rank of Medical Director, and we are informed that his plans for an effective program are well under way. Dr. Hilleboe has recently been invited to be the guest speaker at the President's Banquet of the Southern Chapter of American College of Chest Physicians at its meeting to be held jointly with the Southern Medical Association at St. Louis in November. The invitation was accepted, and he writes that his topic will be "The New Tuberculosis Control Program of the United States Public Health Service." At that time, if not before, it is believed we will definitely learn how much aid Kentucky may expect from the Government financially, as well as from personnel of the service, which may be assigned to the state.

May we take this opportunity to invite the men intending to go to St. Louis in November to attend this banquet meeting, which will be held at the De Soto Hotel, Monday, November 13.

Aiming at the eventual eradication of tuberculosis from Kentucky, this committee feels that an adequate number of beds should be asked for to approximate two beds per annual death. Two beds per annual death from tuberculosis is now considered by the National Tuberculosis Association as the minimum requirement, although three beds per annual death are advised by the National Tuberculosis Association. This would mean an additional number of twenty-four hundred beds for Kentucky. The committee, therefore, suggests in the five sanatorium districts where sanatoria are to be erected that each institution be built with the expectation of at least a 400-bed capacity. If this could be accomplished, there would be in the first district, where an average of 424 deaths occur per year, only about one bed per death. In the third district, where 342 is

the average number of deaths per year, a 400-bed institution, with the 110 beds at Julius Marks Sanatorium, would almost meet the minimum requirement. In the fourth district, where the average deaths per year is 239, a 400-bed institution would approximate the minimal rate, as would also the fifth district, which averages 229 per year. In the sixth district, with an average of 231 deaths per year, a 400-bed institution would also approximate the minimum requirement. The second district, in which Waverly Hills Sanatorium and Hazelwood Sanatorium are located, will have, on the completion of Hazelwood Sanatorium, about 900 beds, with an annual average number of deaths numbering about 510. These institutions, therefore, would almost provide the minimum number of beds advised.

It is realized by the committee that this number of large institutions cannot be built all at once, even if financial assistance may be obtained from the Federal Government. It also must be borne in mind that the maintenance of these institutions will require a large expenditure of money, which at the present time would mean about $1,200 per year per patient. In talking with a member of the Service the other day, he placed the amount at $1,350 per year. Maintenance, of course, is so necessary that the committee feels that prior to the building of the sanatoria, the source of funds for maintenance should be assured.

The committee desires to add that the larger institutions are more economical than small institutions, are more attractive to trained personnal, so that they are easier to be appropriately staffed. The committee also feels that each of the institutions contemplated should be so located that all city utilities, including sewers, may be available. We also believe that medical and surgical consultants should be easily available, in order to obtain the necessary expert consultations.

It is desired to call attention to the death rates of the different sanatorium districts. These rates and the figures above quoted in regard to average deaths per year were worked out by Dr. Russell Teague, Director of Division of Tuberculosis of the State Department of Health, who is a member of this committee. The rates per 100,000 (an average over the last ten years) are as follows:

First District	91.2
Second District	69.8
Third District	77.9
Fourth District	54.4
Fifth District	49.8
Sixth District	82.8

It may be pointed out that the highest rate is in the first district and is due largely to the excessive death rate in Christian County.

Before leaving the subject of sanatoria, the committee wishes to compliment Dr. C. C. Howard's self-sacrificing activities, which resulted in the legislation which has effectively started a real sanatorium program. The committee desires to express its accord with the present law, but hopes that it may be amended so that the individual boards may be benefited by organized medicine. The committee believes that it is very essential that all medical activities of our Commonwealth should be under the supervision of the State Medical Association and removed as far as possible from politics.

Other activities for the prevention and control of tuberculosis are now being carried on with increasing effectiveness by the State Board of Health, through the County Health Departments and traveling X-ray clinics. These clinics are most important in case-finding.

The education in regard to tuberculosis is being carried on energetically by state, county, and city tuberculosis associations, working under the National Tuberculosis Association. The funds derived by this organization from seal sales finance this educational program and have brought really remarkable results. Specialists in tuberculosis are frequently astonished at the knowledge of lay individuals concerning the methods of prevention and treatment of tuberculosis.

The committee, however, desires to point out that education, case-finding, and voluntary sanatorium care are not the entire answer to the program for the eradication of tuberculosis. There must be some method of controlling incorrigible individuals who refuse to be confined at home and refuse sanatorium care. Many of these persons belong to a class of individuals who are able to mingle with others and promiscuously spread the disease. Some method also must be found to control individuals who have been made better by sanatorium care and who leave against the advice of physicians. Adequate laws dealing with these subjects should be passed, patterned, perhaps, after the laws of the States of Wisconsin, New York, and North Carolina.

We wish to call attention to the de-

plorable condition, as far as the care of the tuberculous is concerned, in our state institutions, both prisons and mental hospitals. The committee advises that a separate tuberculosis hospital be provided at one of the mental institutions, where the tuberculous insane may be properly segregated and treated. A somewhat similar institution should be provided at one of the prisons. We advise legislation to take care of these two problems.

Finally, legislation should be enacted to provide necessary financial assistance to the family of the breadwinner who is undergoing treatment for tuberculosis.

The problem of the eradication of tuberculosis from this state and from the United States can be attained, as the tools are at hand; namely, effective education; extensive work of the State Health Department in case-finding, and supervision of cases; sanatorium treatment, which, as you all know, is now chiefly surgical; and effective laws which may be enacted to control effectively the spreaders of the disease. Now that the program is so well started, with adequate financial aid from our coming Legislatures and with the anticipation of effective financial aid from the Federal Government, the eradication of the disease can be visualized.

Respectfully submitted,
Paul A. Turner, Chairman
Benjamin L. Brock
Russell E. Teague
Maurice G. Buckles
Palmer H. Reed

SMITHFIELD KEFFER, Grayson: I move the report be adopted.

The motion was seconded and carried.

PRESIDENT PRITCHETT: Report of the Committee on Cancer, Dr. Wallace Frank.

REPORT OF COMMITTEE ON CANCER

The work of the free clinics for the diagnosis and treatment of cancer in Louisville and Lexington has increased during the past year. As more laymen and doctors throughout the state become familiar with the facilities these clinics offer free of all charge, the more patients are received. One difficulty encountered is the proper disposition of those who can afford to pay. One clinic has met this in part, by giving these patients a choice between service by a doctor of their selection and service by the clinic for which they are required to pay. Where such fees are received, they are used to defray the expenses of the clinic. The committee feels that the danger of treating patients free who can well afford to pay will increase as these clinics grow and that those working in this field must be increasingly vigilant to safeguard the private practice of medicine.

The expenses of these clinics have, until recently, been met by funds collected each April by the Women's Field Army for the Control of Cancer. In fact, the work would not have been done at all without that organization. For the past two years Community Chests in some cities have asked the Women's Field Army to accept funds from the Chest in order to eliminate all other solicitations for money.

At a meeting of the State Executive Committee of the Women's Field Army held in Louisville August 17, Mrs. T. C. Carroll, the State Chairman of the W. F. A., announced that the State Legislature had appropriated $15,000 a year for two years, a total of $30,000, for the work of these clinics in this state. The money is to be paid out through the office of the State Board of Health, under the supervision of Dr. Blackerby, the Secretary. The committee was informed that the State Legislature desires that this be spent on the *care* of *patients* and not on equipment or education of the public. The committee was further informed that additional appropriations for the years to come would depend on the necessity for and the use made of the present appropriation, as shown by the records of the next two years.

This committee is entirely in accord with the State Executive Committee of the Women's Field Army, (much of the personnel is the same) in their plan to start diagnostic and treatment clinics in Ashland, Covington, and Paducah.

We also also wish this body to make formal acknowledgement to our State Legislature expressing the appreciation of the Kentucky State Medical Association for this appropriation.

L. Wallace Frank, Chairman
F. M. Massie
H. V. Johnson

PRESIDENT PRITCHETT: You have heard the report. Is there any discussion?

HUGH L. HOUSTON, Murray: I move the report be adopted.

The motion was seconded by W. B. Atkinson and carried.

PRESIDENT PRITCHETT: Next is the re-

port of the Committee on the Journal, Dr. Stovall.

Report of Committee on the Journal

J. Watts Stovall, Grayson: When the Kentucky State Medical Association was reorganized in 1903, the Constitution and By-Laws provided that the secretary shall be the editor of the Kentucky Medical Journal and that it shall be published under the supervision of the Council. Since this time, the Journal has had only three editors: James B. Bullitt, Louisville; A. T. McCormack, Bowling Green and Louisville; and P. E. Blackerby, Louisville.

The Journal is important to the physicians of Kentucky because it offers to members of the Association their only opportunity to publish their views on scientific and medical subjects read and discussed before their country societies.

The 1943 program papers published were contributed by speakers assigned to the Annual Meeting by the War-Time Graduate Medical Meetings, under the auspices of the American Medical Association, the American College of Physicians, and the American College of Surgeons. The Regional Committee was composed of Elmer L. Henderson, Kentucky, Chairman; with Chauncy W. Dowden, Kentucky, and H. H. Shoulders, Tennessee. We wish to express our gratitude to Kentucky representatives for securing for this meeting the excellent speakers who contributed such splendid papers for the Journal. The Committee, however, recommends that more County Societies be represented in contributions of scientific articles and case reports.

The County Society Reports have been increased in number and improved in content. This shows a healthy interest in the Journal. The editorials and current comments have been of timely interest.

These reports and comments are not an additament to the Journal, but of great importance because, through its columns, a permanent record is kept of all the basic activities of the profession. The County Societies are the foundation stone upon which rests the whole structure of medical organization, reaching its peak in the American Medical Association.

The advertisements, which pay the expenses of the Journal, have increased by thirty-nine pages over 1942. The cost of the Journal, including mailing, printing, postage, envelopes, and salaries, amounted to $7,203.28, while the total receipts, derived mostly from advertising, were $9,331.52. The net profit was $2,-138.24, the largest profit in the history of the Association.

To continue the splendid support our advertisers have given the Journal this year, we urge the members to read these each month and specify their products, when practicable, in making up their orders. The Journal accepts only advertisers approved by the American Medical Association Council on Pharmacy and Chemistry, thus assuring a guarantee of all the products. Reading these is a liberal education in the recent advances in materia medica and other armamentariums to the physician.

In the Annual Number of the Journal is published, in great detail, in the form of voucher checks, every item of expense, and we recommend that the doctors of each County Society go over these expenditures very carefully and offer suggestions for improvement, addition, or deletion. We compliment the editor for this excellent, beautifully illustrated edition.

The McCormack Memorial Number is an outstanding Journal, and we recommend that a copy be sent to the Congressional Library for a permanent file, and that a copy be bound for a permanent place in the State Medical Association files.

Secretary Blackerby: I move the adoption of the report, with a recommendation to the Committee on Resolutions that they draw a resolution thanking the National Wartime Meetings Committee and our own Regional Committee.

The motion was seconded by T. A. Frazer, and carried.

President Pritchett: Next is the report of the Advisory Committee on Pediatrics. It will be read by Dr. Blackerby.

Secretary Blackerby: This is the report of the Pediatric Advisory Committee, of which Dr. Pritchett is Chairman.

Report of the Pediatric Advisory Committee

The Advisory Committee on Pediatrics to the Division of Maternal and Child Health reports that there has been a continued effort during the past year to carry out the policy of holding clinics and conferences on child health throughout the state. Such clinics and conferences were held in Mayfield, Liberty, Lancaster, Stanford, Elizabethtown, Murray, Fulton, Frankfort, Henderson, Paducah, Leba-

non, Vine Grove, Princeton, Glendale, Hickman, Tompkinsville, Springfield, Mackville, Willisburg, Glasgow, Columbia, West Point, Williamsburg, Scottsville, Bowling Green, Franklin, Cynthiana, and Carlisle.

The pediatrician during the past year made the medical examination and gave needed advice on medication and nutrition to the children examined in the clinics held by the Kentucky Crippled Children Commission. Such clinics were held in London, Corbin, Ashland, Shelbyville, Frankfort, Carrollton, Glasgow, Henderson, Pikeville, Prestonsburg, Berea, Louisa, Inez, Owensboro, Harrodsburg, Paducah, Bardstown, Somerset, Hazard, and Whitesburg.

The pediatrician during the past year gave talks on child health before lay groups in Frankfort, Greenville, Paducah, Elizabethtown, Lebanon, Danville, and Glasgow.

The pediatrician also attended several conferences of the State Nutrition Committee, which is active in promoting improved nutrition of the children in the state.

SECRETARY BLACKERBY: In moving the adoption of the report, I call your attention to the fact that the pediatrician referred to here is Dr. Philip Barbour, who has been on the staff of the Department of Health since 1940 and has been carrying out the program for your Postgraduate Committee and the educational program in connection with child health. I would further remind you that Dr. Philip Barbour has just gotten out of the hospital after a somewhat serious illness under the care of Dr. Horine, and is now convalescing; and I would recommend, that the Secretary be instructed to send Dr. Philip Barbour, an ex-president of this Association, and the front of the organization in the postgraduate work, a telegram of good will and wishes.

PRESIDENT PRITCHETT: I think it would be mighty nice to do this. Most of you know that Dr. Barbour is convalescent now. Many of you have been his former students, and all of you are his friends. I think it would be a most gracious thing to have the Secretary send him a wire expressing our good wishes.

You have heard the motion to adopt the report.

The motion was seconded by Dr. Keffer and carried.

PRESIDENT PRITCHETT: Report of the Committee on Syphilis.

SECRETARY BLACKERBY: Dr. Rutledge advises he has no report.

PRESIDENT PRITCHETT: I believe it would be advisable to adjourn now and conclude the program tonight after the dinner.

Upon motion, regularly made, seconded, and carried, the meeting adjourned at four-forty o'clock.

MONDAY EVENING, SEPTEMBER 18, 1944

The meeting reconvened at 8.00 p. m., James H. Pritchett, Louisville, President, presiding.

PRESIDENT PRITCHETT: The meeting will please come to order. We will continue our program of this afternoon.

I think before we proceed that it is only meet and proper to thank Dr. and Mrs. Vance for this wonderful dinner. They have been wonderful hosts. It isn't customary to ask the host to say anything, but on this occasion I want him to say something to us.

C. A. VANCE, Lexington: You know, I feel that the House of Delegates is the backbone of the Association, so I arranged, with Mrs. Vance's help, this dinner tonight for the House of Delegates. I had no speakers' table and arranged no speeches. I thought they would have plenty of speeches elsewhere.

We are very pleased to have you here, and we hope you had a good time and had plenty to eat and enough to drink. (Applause)

SECRETARY BLACKERBY: As an expression of the appreciation of everyone present for the entertainment and the good fellowship, I move a rising vote of thanks to Dr. and Mrs. Vance.

A rising vote of thanks was extended to Dr. and Mrs. Vance.

PRESIDENT PRITCHETT: First on the program held over will be the report of Dr. Lukins of the Delegates to the A. M. A.

REPORT OF DELEGATES TO THE A. M. A.

J. B. LUKINS, Louisville: When the opening session was called to order, 170 of the 175 delegates were present. This number was increased to 172 at the next session. The only absentees were one delegate from Alaska and two from the Philippine Islands.

The secretary reported a membership of 124,452, a net gain of 1,876 over 1943. There was, however, a loss of more than 3,000 fellows from the previous year. Kentucky stands in the unenviable position of near the bottom in the percentage of fellows. Only one state has fewer physicians subscribing to the Journal of

the American Medical Association. More than 4,000 commissioned officers are fellows by virtue of their office. Major Atkinson and I feel that this is a matter about which definite action should be taken. Our Kentucky doctors are the equal in intelligence and progress of any doctors represented at the American Medical Association, and yet we are not taking and reading the Journal, the most widely-read journal and the most progressive in the world today.

The finances of the Association showed an increase in income in 1943, with a corresponding decrease in expenditure. The saving was not the result of planned economies, but because of many curtailments as the results of war. A surplus has been set aside to care for necessary repairs, replacements, etc., that cannot now be taken care of.

Ten Journals are published by the A. M. A. All except one made a profit in 1943.

The President of the Association, Dr. James E. Paullin, made a short report. Also the President-Elect, Dr. Herman Kretschmer, made a short talk at the opening session.

The standing committees made comprehensive reports on various subjects. The special committees also made reports that gave evidence of much careful work. Very little that was controversial was reported, and most of the business received favorable action by the House of Delegates.

The proposal of some of the western states to change the method of electing Trustees was voted down.

Two resolutions were introduced to curb the activity of the editor of the Journal: one that would have instructed the Board of Trustees to remove him from his position as editor of the Journal received nine votes; the second, requesting that his official activities be confined to his official duties, was also defeated overwhelmingly.

Three resolutions were presented, and all adopted, denouncing the appropriation by Congress of funds to the Department of Labor for a survey into industrial hazards.

In the selection of President-Elect, Dr. Rodger Lee of Boston seemed to be the popular choice. In order to bring about his election, it was necessary to request his resignation from the Board of Trustees.

Atlantic City was chosen as the meeting place for 1947.

Two very significant happenings of the Chicago meeting should be brought to the attention of this association:

1. The apparent lack of comprehension of the House of Delegates concerning the weakness of our defensive position so far as control of medical practice is concerned, and

2. The closing statement in the public address of Rear Admiral McIntire, Surgeon General of the United States Navy.

The more vital matter of the Wagner-Murray-Dingell Bill received only passing notice on the floor of the House, and the little comment that was made was neither brilliant nor helpful. We think it would be well for us to note and give serious thought to the movements that are already taking place relative to changes in our present plan of medical service. Ten states have already adopted plans for extending medical service, and these plans are now in operation. The states are: California, Connecticut, Kansas, Michigan, Missouri, Nebraska, Oklahoma, Pennsylvania, West Virginia, and Wisconsin.

The American Medical Association, at its 1943 session, approved the appointment of a Council to which all matters relative to change in medical service are to be referred. This Council is in full operation, and has an all-time secretary with an office in the City of Washington. In addition to that, there is the National Physicians Committee, which is very active, and which will be described to you tomorrow night by Dr. Edward H. Cary, Dallas, Texas.

Major Atkinson will discuss with you the closing statement of Rear Admiral McIntire in his address to the A. M. A., and I wish to call your attention to at least two paragraphs in the speech made by Wendell Berge, Assistant Attorney General of the United States, before the American Urological Association, St. Louis, Missouri, June 21, 1944. In speaking of a change in our present plan of medical service, he made the following statements:

> **The question demands, not an easy answer, but painful, constructive, detailed thought. It demands, too, an indulgence in downright trial and error without which nothing worth-while emerges. A few experiments—far fewer than the length and breadth and depth of the subject demands—have been blazing fresh trails.**
>
> **The course of events moves fast, and to me a new medical order seems in-**

evitable. My fear is not that we will not get it—an awakened public, sparked by our veterans, will see to that. My fear is that we will not bring to its creation all the knowledge, wisdom, and understanding that we as doctors possess.

PRESIDENT PRITCHETT: Major Atkinson, may we hear from you as Delegate to the A. M. A.?

MAJOR W. B. ATKINSON, Campbellsville: In all probability, I should not be talking because, as you know, I am trying to fill the shoes of Dr. Virgil Simpson, which is practically impossible for me to do; but there are several significant things that I would like to emphasize.

If you remember, the meeting of the American Medical Association was in June. It was the week after Admiral McIntire, who is the personal physician of the President, had completed his semi-annual examination of the President. He completed his address in somewhat these words, I don't know that I should mention this at all, I am quoting from him almost verbatim, but I shall do so anyway, "If you doctors don't like the plan or the plans that have been before Congress, why don't you get one you do like?"

If that is not some words of advice direct from the horse's mouth, I am extremely mistaken on the thing.

All of the talk in the House of Delegates was against the Wagner-Murray-Dingell Bill. There was nothing at all constructive, just "We don't want it, we don't want it." There is going to be a change. If we want the thing after the change to be as we want it, we had better start making our plans now or we are going to have to take the thing that has happened to us because none of us can stop the practice of medicine.

Every night when we kneel down to say our prayers, we should give thanks that there is such a state as Arkansas in the Union. Arkansas is the state that keeps Kentucky from being the last in everything. (Laughter) Arkansas is the only state in the Union that has fewer subscribers to the Journal than Kentucky has. For example, there is one town in Kentucky, and I am going to tell you the name, Glasgow, and not the names of the rest of them, that has eighteen physicians in it; twelve of those physicians subscribe to the Journal of the American Medical Association. That is the only town in Kentucky that has as many as 50 per cent subscribers.

There is one other town that has one hundred ninety-five physicians in it. Seventy-five of those are Fellows of the A. M. A., but twenty-one of those who are Fellows by virtue of the fact that they are members of the Public Health Service and the armed forces, which leaves fifty-four subscribers of the Journal in that city, whose name I will not mention.

There is another city that has seven in it; there are two subscribers of the Journal.

There is one other that has thirteen, and has four; there is another that has fourteen, and has two; one that has ten and only five subscribers; one that has thirty-nine, and thirteen subscribers; and you can go on indefinitely. There are very few that have more than 40 per cent.

In talking this over with the other Delegate of the Association, we just wondered how anybody could really have practiced medicine 100 per cent without the help of the Journal of the American Medical Association. So we are suggesting that there be a special committee appointed to popularize this Journal, and if necessary we may ask them to put "Li'l Abner" in it.

J. SAM BROWN, Ghent: I want to say that my town has 100 per cent subscribers.

MAJOR ATKINSON: He is absolutely right, because he and one other are the only ones in town, aren't you? (Laughter)

There was one other matter that Dr. Lukins mentioned that I want to emphasize also. The House of Delegates is more or less a league of gentlemen who believe in keeping the status quo. In the discussion on the editor of the Journal, the action of the House of Delegates has practically given him complete authority to formulate all of the future policies of the American Medical Association, which may or may not be a wise plan.

I was elected Delegate temporarily. I am not a candidate for re-election, and for that reason at the time for new business I want to present a motion. (Applause)

PRESIDENT PRITCHETT: Is there any discussion of this very comprehensive report? It is something like a new shoe; it pinched a little when he said a few things. I lived in Arkansas myself in the last war, before I went overseas. I didn't know it was that bad, Major. What is your pleasure?

W. E. GARDNER, Louisville: I move the adoption of the report.

The motion was seconded by J. Sam

Brown.

PRESIDENT PRITCHETT: Any discussion? The motion was carried.

PRESIDENT PRITCHETT: The next report is that of the Committee on Crippled Children, by Dr. Barnett Owen of Louisville.

REPORT OF COMMITTEE ON CRIPPLED CHILDREN

W. BARNETT OWEN, Louisville: I have presented the report here and signed some very distinguished names to it. If there is any member's name which appears on it who doesn't agree with what I say, I will give him an opportunity to withdraw it. We couldn't have a meeting.

The Kentucky Crippled Children Commission, official state agency administering services to crippled children under twenty-one years of age, whose parents cannot pay for their treatment, reports the following accomplishments from the beginning of the fiscal year, July 1, 1943, to September 1, 1944:

1. Eighteen hundred individual cases have been treated, or an average of 129 cases monthly, through the splendid cooperation and assistance of the county health directors and their staffs.

2. Fourteen hundred twenty examinations were made at 19 orthopedic itinerant clinics, attended by an orthopedic surgeon, a pediatrician, Commission orthopedic nurses, county health officers, and county public health nurses. Curtailment of the itinerant clinic program was necessary this past summer because of the poliomyelitis epidemic. Plans for such clinics for the next year will be greatly affected because of the reduction in number of the Commission's professional staff.

3. Seven hundred three examinations were made at 49 nurse-pediatric clinics, attended by a pediatrician, a Commission orthopedic nurse and directors and staff nurses of county health departments. In other words, these examinations supplemented what ordinarily would have been these follow-up clinics to a certain extent. This wartime service has made possible supervision of many children who could not have had necessary observation and check-up home visits, since the Commission's professional staff now includes only eight orthopedic surgeons and three orthopedic public health nurses to cover the case load for the entire state.

4. Three thousand four hundred forty-nine have been examined by staff orthopedic surgeons through office visits to Commission headquarters at Louisville.

5. There have been 1,325 hospital admissions.

6. Three thousand eight hundred seventy-five services, not including hospitalization, such as braces, crutches, corrective shoes, X-rays, casts, etc., have been rendered.

7. The Kentucky Crippled Children Commission, the official agency, with its cooperating agency, the Kentucky State Chapter of the National Foundation for Infantile Paralysis, has rendered great service during the current poliomyelitis epidemic. There have been 588 cases from 87 counties, with 27 deaths. Of the 588 cases, 225 were from Louisville and Jefferson County, with 11 deaths. Muhlenberg County was the next largest, having had 36 cases, with 1 death. 378 have been hospitalized for Kenny hot foments and muscle re-education, under supervision of orthopedic surgeons and trained physical therapy technicians. Of the number hospitalized, 166 have been discharged and are attending out-patient clinics at the Kosair and General Hospitals in Louisville, where they are seen by an orthopedist, a pediatrician, and a physical therapy technician.

8. Plans have been made, and building changes are in progress for the opening in the next few weeks of a new out-patient clinic for poliomyelitis patients at the General Hospital, Louisville. This clinic will be under the joint supervision of the University of Louisville School of Medicine and the Kentucky Crippled Children Commission. The Kentucky State Chapter of the National Foundation for Infantile Paralysis will be largely responsible for the financing of this clinic.

9. In July, 1944, in cooperation with the Boone-Kenton-Campbell local chapters of the Kentucky Society for Crippled Children, a new unit of the Commission was established at Covington to provide care and treatment for crippled children from Boone, Kenton, and Campbell Counties. Monthly clinics are held by Dr. T. H. Vinke, orthopedic surgeon, and Dr. Gay Vandermark, pediatrician, at the unit headquarters, St. Elizabeth's Hospital, where cases recommended for surgery are admitted.

10. A social service department was instituted by the Commission in December, 1943, to determine the economic status of families of crippled children, to assist the parents to plan better home conditions

and to help the families and children to meet and to adjust their welfare problems.

In August, 1944, a new Commission board, consisting of the following members, was appointed by the Governor:

Mr. S. Lyman Barber, Louisville, President
Mr. Ben Williamson, Jr., Ashland, Vice-president
Mrs. Paul Wickliffe, Greenville, Secretary-Treasurer
Mr. W. H. Creason, Mayfield
Mr. Fred Bryant, Lexington
Mr. Charles A. Patzold, Bellevue
Mr. N. V. Perkins, Williamsburg

The Board has had one meeting, and the Director of the Commission reports that the members are outstanding citizens who are deeply interested in the progress and the expansion of the program for crippled children.

The Kentucky Society for Crippled Children has purchased ten acres of land near Lexington on which it proposes to erect a convalescent home as soon as the war ends. Funds are now being raised to build and equip the institution, and a special committee is at work formulating plans.

The convalescent home will be operated by the Kentucky Society for Crippled Children as part of its program to aid the State Commission and should greatly increase facilities for care of patients in central Kentucky.

Respectfully submitted,
Charles C. Garr
C. M. McKinlay
Leslie H. Winans
Franklin Jelsma
W. Barnett Owen,
Chairman

Here is a list of all of the dates and the locations of the clinics that were held, the number of patients examined, and the counties from which they come. This can be either printed in the Journal, or not, as you choose.

LIST OF ITINERANT CLINICS FROM JULY 1, 1943 TO SEPTEMBER 1, 1944

Date	Clinic Location	Counties Included	Total Examined		
			New	Old	Total
7/22/43	Bowling Green	Allen, Barren, Butler. Edmonson, Hart, Logan, Simpson, Warren	26	82	108
8/ 4/43	Somerset	Casey, Lincoln, McCreary, Pulaski, Russell, Wayne	54	77	131
9/ 9/43	Hopkinsville	Caldwell, Christian, Hopkins, Lyon, Todd, Trigg	21	46	67
9/22/43	Mt. Sterling	Bath, Menifee, Montgomery, Morgan, Powell, Rowan	15	17	32
10/22/43	Columbia	Adair, Clinton, Cumberland, Green, Marion, Metcalfe, Monroe, Taylor	22	48	70
10/28/43	Harlan	Harlan	47	58	106
11/ 3/43	Newport	Boone, Campbell, Kenton	4	54	58
11/17/43	Richmond	Madison	11	42	53
4/ 4/44	Henderson	Henderson, Union, Webster	24	54	78
4/12/44	Berea	Madison, Rockcastle, Jackson	0	19	19
4/20/44	Owensboro	Daviess, Hancock, McLean, Part of Ohio	31	77	108
5/10/44	Paducah	Ballard, Calloway, Carlisle, Crittenden, Fulton, Hickman, Livingston, McCracken, Graves, Marshall	34	89	123
6/ 6/44	Bardstown	Nelson, Larue, Hardin, Bullitt, Spencer, Washington	30	54	84
6/14/44	Somerset	Pulaski, Wayne, Russell, Casey, Lincoln, McCreary	44	82	126
7/12/44	Covington	Boone, Campbell, Kenton	2	31	33

7/18/44	Hazard	Knott, Leslie, Perry	66	60	126
7/19/44	Whitesburg	Letcher	32	32	64
7/20/44	Owensboro (Polio Cases Only)	Daviess	20	0	20
8/ 9/44	Covington	Boone, Campbell, Kenton	2	13	15
	TOTALS		485	935	1420

LIST OF OBSERVATION CLINICS FROM JULY 1, 1943 TO SEPTEMBER 1, 1944

Date	Clinic Location	Counties Included	Total Examined		
			New	Old	Total
7/ 7/43	Frenchburg	Menifee	0	4	4
7/ 8/43	West Liberty	Morgan	13	10	23
7/14/43	Irvine	Estill	2	9	11
7/23/43	East Louisville	Jefferson	0	15	15
7/23/43	Central Louisville	Jefferson	0	2	2
7/30/43	Fincastle (Louisville)	Jefferson	0	2	2
8/18/43	Pikeville	Pike	8	6	14
8/27/43	East Louisville	Jefferson	6	4	10
8/27/43	Central Louisville	Jefferson	0	3	3
9/ 9/43	Sandy Hook	Breathitt	3	23	26
9/24/43	East Louisville	Jefferson	5	11	16
9/24/43	Central Louisville	Jefferson	0	1	1
10/ 7/43	McKee	Jackson	28	9	37
10/ 8/43	Manchester	Clay	15	24	39
10/13/43	Mt. Vernon	Rockcastle	28	18	46
10/22/43	Central Louisville	Jefferson	0	2	2
10/22/43	East Louisville	Jefferson	3	5	8
10/29/43	Fincastle (Louisville)	Jefferson	0	4	4
11/26/43	Central Louisville	Jefferson	0	4	4
11/26/43	East Louisville	Jefferson	1	7	8
12/ 1/43	London	Laurel	8	25	33
12/ 2/43	Corbin	Whitley, Knox, Laurel	18	31	49
12/14/43	Prestonsburg	Floyd	4	10	14
1/28/44	East Louisville	Jefferson	3	19	22
1/28/44	Central Louisville	Jefferson	0	8	8
2/ 2/44	Shelbyville	Shelby	1	13	14
2/ 3/44	Frankfort	Franklin	0	12	12
2/18/44	Central Louisville	Jefferson	0	9	9
2/25/44	East Louisville	Jefferson	0	6	6
3/13/44	Glasgow	Barren	5	19	24
3/17/44	Central Louisville	Jefferson	1	7	8
3/24/44	East Louisville	Jefferson	0	11	11
3/31/44	Fincastle (Louisville)	Jefferson	0	7	7

4/10/44	Pikeville	Pike	8	11	19
4/11/44	Prestonsburg	Floyd	6	17	23
4/13/44	Paintsville	Johnson	6	18	24
4/17/44	Louisa	Lawrence	3	5	8
4/18/44	Inez	Martin	5	12	17
4/19/44	Salyersville	Magoffin	3	4	7
4/20/44	Central Louisville	Jefferson	2	1	3
4/28/44	East Louisville	Jefferson	3	9	12
5/ 3/44	Harrodsburg	Mercer	7	15	22
5/19/44	Central Louisville	Jefferson	2	2	4
5/22/44	Carrollton	Carroll, Gallatin	4	10	14
5/26/44	Ashland	Ashland District	6	23	29
5/26/44	East Louisville	Jefferson	0	6	6
6/16/44	Central Louisville	Jefferson	0	5	5
6/23/44	East Louisville	Jefferson	3	7	10
6/30/44	Fincastle (Louisville)	Jefferson	0	8	8
	TOTALS		210	493	703

PRESIDENT PRITCHETT: You have heard this very comprehensive report. Is there any discussion? What is your pleasure? Do I hear a motion to adopt this report?

H. K. BUTTERMORE, Liggett: I so move.

The motion was seconded by J. Sam Brown and carried.

PRESIDENT PRITCHETT: The next report is that of the Committee on Public Relations, Dr. Irvin Abell, Sr., of Louisville.

REPORT OF COMMITTEE ON PUBLIC RELATIONS

IRVIN ABELL, Louisville: The American Medical Association and constituent State Associations have been engaged for more than a year in keeping the profession informed on legislation relating to both compulsory and voluntary medical insurance plans. Your committee, while recognizing that there is a continuing interest in the promotion of federalized control of medicine, feels confident that the public has come to realize its inherent menace to individual initiative and organized efforts within the profession and its allies: the dental, nursing, and pharmaceutical professions, and many other public and private enterprises that render service on behalf of the public welfare. However, in expressing this attitude, we are not content to advise mere "watchful waiting," but insist that constructive action on every front is necessary if all the problems concerned with prevention and remedy of human ills are to be resolved in the interest of the common good.

Medical science has gone a long way and has the answer to many of the ills that afflict humanity, but, like many other social service research and analytical sciences, is not content with progress attained but faces the modern day needs with full determination to do more and accomplish still greater things for society as a whole. It is encouraging to find that there is a constructive reasoning and planning by all of the service agencies that play a part in the whole program for public health and care of the sick. An illustration of this is contained in an editorial in the American Journal of Pharmacy of February, 1944, which says in part:

> **We in the professions related to public health cannot afford to sit complacently and parry the criticism of those who quite properly ask 'Cannot some real improvement be made in raising the standards of health of the common man?' It is ridiculous for any well-informed person to take the position that medical care in its present state of organization is adequate for all income groups. This does not answer the question satisfactorily, nor does it offer any effective barrier to the serious consideration of bills like that now before Congress. . . .**
>
> **Let no one believe that the private practice of medicine, pharmacy, dentistry, or anything else is a divine right,**

It is, rather, a privilege granted by society which it serves, but only so long as it concerns itself primarily with the protection and assistance of society as a whole.

The editorial specifies two things that must be done if real progress without medical control is to be achieved.

First and foremost, there must be active cooperation between medicine, dentistry, and pharmacy. Second, a plan of health insurance must be offered to the American people 'which still safeguards private enterprise, but accomplishes what millions of Americans now demand —a means of taking care of the various emergencies that arise throughout life due to sickness and injury.'

With a finished plan, the health professions, insurance, and American industry can then say to the people 'Here is a better health insurance plan; it gives you what you have asked for, and in addition, it avoids regimentation and bureaucratic control. It is the real American way.' Then, and then only, can we properly and effectively oppose government conceived plans, by ourselves offering something better. We must not overlook the fact that it is the function of government to protect its citizens in the absence of some other private agency which does so to the satisfaction of the majority concerned. There has never been a time in history when a strictly reactionary policy was successful. To avoid the pitfalls of government control we must take positive action.

Many other allied groups are wholeheartedly supporting American medicine in its contention that freedom from bureaucratic control must be maintained, but insist that unified action, aimed at universal and adequate medical service, must not only be planned but carried through.

Your Public Relations Committee brought this problem to the House of Delegates last year and urged considered thought and action. A resolution was adopted protesting the pending legislation before Congress. Following this, the Kentucky Representatives in Congress were informed of our action. While we may feel sure that we have the sympathy of these, we must continue to urge every possible alternative to Federal control of medical and health care of our people, and, to this end, be prepared to support proper and adequate state and local plans. It follows, therefore, that if organized medicine is to maintain its prestige and support, it must, locally and nationally, be prepared to meet the contingencies growing out of the demand for medical care for all the people.

On the state and local levels, there are many evidences of state responsibility for care of its unfortunates—the mental, the indigent (medical care on a local level), the crippled children, the incurables, the blind or near blind, the deaf and dumb, the indigent cancer patient, the indigent tuberculous patient, those in labor benefiting by compensation programs, the entire population served by health departments with programs for preventive disease services, and, in municipal areas, the groups of various economic levels that receive the social, health, and welfare services of voluntary agencies supported by public subscription. While we recognize that these are services growing out of public demands to alleviate certain social evils, we can but sense that, while they represent trends in the body politic and are serving a public good, we must face the fact that they provide incentives for other encroachments upon the private practice of medicine and the field of individual enterprise.

The fact that organized medicine has encouraged these developments in state medicine furnishes the greater reason for preparedness within the profession to assure safeguards for the medical protection of the individual wage earner and his family in the broad field of community life. Through the years for more than a half century, the organized medical profession, in order to compete with those socialistic-minded persons who would mislead our people, has served legally as sponsors of public health service in Kentucky, so that there would be assurance of the proper application of medical science in the protection of the people.

We should not lose sight of the fact that during this war period, when so many of our doctors are on duty with the armed forces, many cultists are taking advantage of the situation to entrench themselves in positions of security by assuming to practice the healing art beyond the authority granted by law and capitalizing on the public clamor for more adequate civilian medical service. Herein lies a very great danger to the public health, for these cultists have, in most instances, not even a smattering of medical knowledge. Notably among this group are the so-called naturopaths, who have added to the physiotherapy curric-

ulum a minimum of acquaintance with "Nature's remedies," or, as they claim, the "simple natural drugs." These cultists have obtained a special recognition by law in a very few states. They attempted to secure enactment of such a law in Kentucky at the last session of the General Assembly, but were overwhelmed with opposition and withdrew promptly. However, they will persist in these attempts and, like all similar groups, can only be thwarted by constant vigilance on the part of the really scientific groups.

Your committee would like to report that constructive legislation was passed in the last General Assembly on behalf of local public health services, hospitalization for tuberculosis patients, diagnostic and treatment centers for indigent cancer patients, improvement of state hospitals for the insane, correctional diagnosis of patients with silicosis, with a plan for compensation, and some necessary additions to the narcotic laws. The bill for Hospital Registration was not introduced for the reason that there were so many doctors in the Service who would be without representation, either in support of or in opposition to it. This committee would recommend this legislation for future consideration and action. Members may obtain its full purport in the Report of the House of Delegates in the November, 1941, issue of the Kentucky State Medical Journal (page 465).

After consultation with officers of the Kentucky State Medical Association and the Dean of the University of Louisville School of Medicine, the Kentucky Farm Bureau sponsored a bill in the last General Assembly to provide scholarship loans for students from rural sections of the state, in an annual amount of $600.00 each, on condition that any student accepting such loan would obligate himself to locate in any rural section of the state where there were needs—the needs to be determined by the State Board of Health. It is believed this bill would have received favorable consideration and probably passed, except for the fact that medical students throughout the country were, in a large measure, being financed through their medical courses by the government as a part of the war effort. Such a bill would probably result in bringing about the location of young physicians in rural areas, which constitute the pressing need for medical service in Kentucky, and your committee would recommend some legislation of this type for the approval of the House of Delegates.

A number of representative citizens of the state have formed what is known as "The Committee for Kentucky" for the purpose of extended study of needs affecting health, education, and welfare. This committee will be accumulating data and developing plans for the post-war period, and, coincident to this program, there will be operating a vocational rehabilitation service, under national sponsorship, with a definite committee functioning in the state. It follows that organized medicine will be looked to for cooperation in all matters relating to public health. In consideration of this, your committee would recommend that the House of Delegates authorize the Council to appoint a committee on Post-War Medical Service to function independently for the profession and, at the same time, be in position to work coordinately with other public and organization committees.

It is quite possible that, in the development of post-war employment programs, a number of projects will be set up for the construction of public utilities, such as water and sewerage systems, health centers, hospitals, clinics, dispensaries, and recreational centers. If such programs are to come into existence, this committee from the Kentucky State Medical Association would be in position to advise with state and local health authorities and other agencies, and, in addition, would represent the Association in all rehabilitation programs.

This committee has watched the development of the Emergency Maternity and Infant Care program in Kentucky, and there seems at the present time an almost complete acceptance of the program in this state, together with a very fine spirit of cooperation between the physicians and the administrative agency in the Department of Health.

It would seem fitting to quote from a special message from the Surgeon Generals of the Army and Navy to the physicians of the United States in regard to this particular service program:

> **Physicians the country over are contributing their medical skill in this war time program generously and in return for moderate recompense. Hospitals the country over have opened their doors to these wives and their infants, making available accommodations where their medical needs can be met adequately, though without luxury care.**

Nurses the country over are helping in the city and rural homes and in the hospitals. . . The morale in the armed forces is being raised and our fighting men go overseas with greater confidence in the security of their families because of this wartime program. We who are responsible for the health and medical care of the men in the armed forces are grateful to you—physicians, nurses, hospitals—who are participating in this program of care for the wives and infants of these men. . . . Your contribution is an invaluable aid to us in the prosecution of the war.

Irvin Abell, Chairman
E. W. Jackson
J. B. Lukins
E. B. Bradley
P. E. Blackerby

PRESIDENT PRITCHETT: This excellent report gives us serious food for consideration. The medical dragons seem to be at our door, and it depends upon the individual doctor in the various county and state societies over the whole country, as well as the American Medical Association and other societies.

J. W. STOVALL, Grayson: I move the report be accepted as read.

The motion was seconded by H. K. Buttermore and carried.

PRESIDENT PRITCHETT: Dr. Abell has a second report for the Committee on the McDowell Memorial.

REPORT OF COMMITTEE ON THE MCDOWELL MEMORIAL

IRVIN ABELL, Louisville: At the 1943 meeting of the House of Delegates a list of the repairs needed at the McDowell Memorial was submitted by this committee. Upon motion of Dr. John Scott, of Lexington, the House of Delegates unanimously voted to authorize the making of the repairs and that same be paid for out of funds of the Association.

Dr. Rice Cowan, a member of the McDowell Memorial Committee, secured a bid from the only available contractor, Mr. Harold Price, for the necessary work to put the Home in good order. This was submitted to Dr. Blackerby and, in view of what seemed to be an excessive charge for the contemplated work, the matter was referred to the Council with a request to the McDowell Memorial Committee to secure additional bids. Since, as stated above, there was but one available contractor, no further bids were procurable.

The Council, after reviewing the bid of Mr. Harold Price and carefully considering all of the circumstances, authorized Dr. Virgil Kinnaird, a member of the Council, to cooperate with Dr. J. Rice Cowan, of Danville, in arranging for a contract to do all the painting of the interior of the Memorial Building, provide the necessary screens and Venetian blinds, and to restore the roof to the best possible condition. This work will be carried out as soon as prevailing conditions permit.

The committee, in its report one year ago, called attention to the fact that Mrs. August Schachner had donated several hundred copies of Dr. Schachner's book on Dr. McDowell. These are unbound and even so the custodian has sold a few to visitors. They could be bound at an approximate cost of one dollar a volume and would find a market at $2.50 to $3.00 a volume. Owing to wartime restrictions of travel, this project is one to be borne in mind for future exploitation when normal travel is resumed. Receipts from the sale of this book, as well as those from available pamphlets, would provide a fund to cover the cost of keeping the Home clean and presentable.

Irvin Abell, Chairman
Emil Novak
C. A. Vance
J. Rice Cowan
John H. Blackburn
J. Gant Gaither

I regret that Dr. Cowan was unable to remain over for the evening session. He would have been able to give you the circumstances which have arisen in regard to the Home. It seems that the appropriation for the Custodian of Parks and Public Property in Kentucky has been reduced from $30,000 to $20,000, $9,000 of which goes for the maintenance of the Old Kentucky Home at Bardstown, leaving but $11,000 to be spread out for the remainder of the state public properties. In view of this, Mr. Dyche, who is the Custodian of State properties, has decided to close the McDowell Home indefinitely. Those of you who saw the afternoon paper noted an account of this in it.

Just what effect that will have upon us, I do not know. Relying upon memory, I think that the deed which conveyed this property from the Kentucky State Medical Association to the Custodian of Public Property of the State of Kentucky had a number of provisions stating the conditions under which the transfer was made, the purposes for which the Home was to be maintained as a memorial to

Dr. McDowell, and, if I remember correctly, the final provision stated that in the event the Custodian of State Property failed to maintain the home as a memorial, the deed should then be returned to the Kentucky State Medical Association. Just what the future holds for us in respect to this, I do not know. Thank you.

PRESIDENT PRITCHETT: You have heard Dr. Abell's report. What is your pleasure?

J. E. EDWARDS, Lancaster: I move it be adopted.

The motion was seconded by J. B. Lukins and carried.

PRESIDENT PRITCHETT: Other reports will be held until Wednesday morning, due to the fact that they have a direct bearing upon the program of that morning.

SECRETARY BLACKERBY: The two reports referred to are the reports, first, of the Committee on Miscellaneous Business. On any other business not included in reports made heretofore, if anyone has a suggestion of anything to be brought up he will refer it to Dr. Pulskamp, the Chairman of the Committee on Miscellaneous Business.

The other is the report of the Committee on Resolutions, which will come on Wednesday morning at the last session of the House of Delegates. Dr. H. G. Reynolds, Paducah, is the Chairman of that committee, and any who have any resolutions to present to the House of Delegates should have them prepared and in the hands of Dr. Reynolds before the meeting on Wednesday morning.

Someone called to my attention tonight the fact that he had not been able to locate the quarters in which the scientific exhibits are. Four directing signs on the mezzanine floor, pointing the way to the scientific exhibits, have been put up. In case you don't see those signs, or can't see them, the scientific exhibits are in the room right off the mezzanine floor.

At 9 o'clock in the morning we will open the scientific session with the inauguration of the new President, the President-Elect becoming the President, and begin the program of Scientific Meetings. You are familiar with the program and need only to be reminded that this has been sponsored by the National Wartime Medical Meetings Committee, acting for the American Medical Association, the College of Surgeons, the College of Physicians, and carried out with your own Committee on Scientific Program, with the advice and help, as Dr. Miller announced, of the Regional Wartime Medical Meetings Committee.

We think it is going to be a splendid meeting, a splendid scientific program contributed to by some of the foremost men connected with the Army and Navy and men who have volunteered their services to the National Wartime Medical Services Committee.

MAJOR W. B. ATKINSON, Campbellsville: I requested a moment ago an opportunity to bring up some new business. I was elected Delegate for one meeting of the American Medical Association. I am not a candidate and will not be a candidate for re-election. Therefore, I would make this motion: that in the future the Kentucky State Medical Association pay the transportation, both ways, and the housing for all Delegates to the American Medical Association.

PRESIDENT PRITCHETT: Do I hear a second?

The motion was seconded by Dr. James Lutz, Louisville.

PRESIDENT PRITCHETT: The motion is that the expenses be paid?

MAJOR ATKINSON: Not the expenses, the transportation and housing.

PRESIDENT PRITCHETT: All in favor say "aye"; opposed "no." It is so ordered.

The meeting adjourned at nine forty-five o'clock.

WEDNESDAY MORNING, SEPTEMBER 20, 1944

The meeting convened at 8:05 a. m., the President, O. O. Miller, Louisville, presiding.

PRESIDENT MILLER: The meeting will please come to order.

The first order of business is the roll call.

The Secretary called the roll.

SECRETARY BLACKERBY: The roll has been called and a quorum is present.

PRESIDENT MILLER: The first order of business, gentlemen, is the report of the Committee on Credentials.

JAMES S. LUTZ, Louisville: I will report for the Credentials Committee that the credentials have been examined and found regular and in order.

J. SAM BROWN, Ghent: I move the report of the Credentials Committee be accepted.

The motion was seconded by Smithfield Keffer, Grayson, and carried.

PRESIDENT MILLER: Next is the Election of Officers.

C. C. HOWARD, Glasgow: We have a de-

mocracy and we go over the state to elect a President. It is bad when members of an organization do not recognize each other in any position of honor because there are usually men in every part of the state who would carry on if you would give them a chance. I wish to nominate none other than Dr. J. Watts Stovall, a proven man to the Association and to his people.

PROCTOR SPARKS, Ashland: I second the nomination.

T. A. FRAZER, Marion: If there be no objection I move the nominations be closed and Dr. Stovall be elected by the casting of a ballot.

JOHN W. SCOTT, Lexington: Is another nomination in order?

PRESIDENT MILLER: Yes, sir.

J. W. SCOTT: I nominate Dr. Luther Bach of Covington.

J. E. EDWARDS, Lancaster: I second the nomination of Dr. Luther Bach.

PRESIDENT MILLER: Are there any other nominations?

W. B. ATKINSON, Campbellsville: I move you the nominations close.

E. L. HENDERSON, Louisville: I second Dr. Atkinson's motion.

The motion was put to a vote and carried.

PRESIDENT MILLER: The Tellers will please spread the ballot, and I will appoint as Tellers Dr. McBee, Dr. Lutz, and Dr. Sparks.

While the Tellers are counting the ballots, I would like to recognize Tom Hendricks, the Secretary of the Indiana Medical Society. Tom, will you please stand up and be recognized? (Applause) Also, Dr. Carl McCaskey, the Immediate Past President of the Indiana Medical Society. (Applause) Dr. Nafe, also from Indiana, will you stand up and be recognized? (Applause) We have enjoyed so much having all of you.

The Tellers have completed the count and they inform me that Dr. J. Watts Stovall has been elected President-Elect of the Kentucky State Medical Association. (Applause) The vote was 35 to 23.

Will someone please escort Dr. Stovall to the House of Delegates?

The next order of business is the election of a Vice-President from the Eastern section of Kentucky. May I have nominations?

JOHN W. SCOTT, Lexington: I want to nominate one of our members from the northern section of our district who has been a faithful member of this Association for years, has served on its committees and has never failed to do anything that is right and that he has had an opportunity to do for the advancement of the profession and the Association. He is a splendid practitioner of medicine, Dr. R. S. McBee, Owenton.

C. A. VANCE, Lexington: I want to second that nomination.

PRESIDENT MILLER: Are there other nominations from the Eastern section of Kentucky for Vice-President?

ERNEST B. BRADLEY, Lexington: I move the nominations be closed and the Secretary cast one ballot.

The motion was seconded by E. L. Henderson, Louisville, and unanimously carried, and the Secretary cast the ballot.

PRESIDENT MILLER: The Secretary has cast one ballot for Dr. McBee and he is duly elected as Vice-President for Eastern Kentucky. Will you please stand up and be recognized, Dr. McBee? (Applause)

Dr. Stovall, I congratulate you, sir, on being elected President-Elect of the Kentucky State Medical Association. Will you make a few remarks?

J. WATTS STOVALL, Grayson: With the help of you all, I will do my best to make you a good President. (Applause)

PRESIDENT MILLER: The next order of business is the election of a Vice-President from the Western section.

L. S. HALL, Campbellsville: I wish to place in nomination before this body the name of Dr. C. V. Hiestand, Campbellsville, Taylor County, for Vice-President for that district. Dr. Hiestand is a graduate of one of the old schools in Louisville in 1897. He is 73 years old and he is still the most active man in that part of the state. He has raised eleven children and sent two to the Army. He is an untiring worker, and, except for a year spent in the Eastern section, he has spent 45 years in Taylor County in the active practice of medicine. He has been President of the local society and Immediate Past President of the County Board of Health. He is loyal to organized medicine and to the State Association. He is quite a philosopher and he is a good, all-round man. I wish to put his name before this body.

J. I. GREENWELL, New Haven: I want to second the nomination.

SMITHFIELD KEFFER, Grayson: I want to second the nomination for the country doctor. I think a country doctor is the grandest thing on earth.

E. L. HENDERSON, Louisville: I move the nominations be closed and the Secretary cast one ballot.

The motion was seconded by C. C. Howard, Glasgow, and carried unanimously, and the Secretary cast the ballot.

PRESIDENT MILLER: Dr. Hiestand is duly elected.

Nominations are now in order for Vice-President for the Central section of Kentucky.

JAMES S. LUTZ, Louisville: I want to put in nomination Dr. Walter Hume.

SMITHFIELD KEFFER, Grayson: I second the nomination.

JAMES H. PRITCHETT, Louisville: I move the nominations close and the Secretary cast one ballot for Dr. Hume.

The motion was seconded by J. Sam Brown, Ghent, and carried.

W. B. ATKINSON, Campbellsville: I rise to a point of order. The Constitution provides that it shall be a secret ballot. Therefore, when the Secretary casts the ballot it must be secret and the House cannot tell the Secretary whom he shall vote for.

SECRETARY BLACKERBY: Will you amend it?

MAJOR ATKINSON: No, sir, it is all right with me. I am just calling attention to it.

PRESIDENT MILLER: The Secretary has cast the ballot and Dr. Walter Hume is elected Vice-President from Central Kentucky.

We now come to the nominations for Councilors. The first one is for the Fifth District to succeed Dr. J. B. Lukins. May I have nominations for the Fifth District?

JAMES S. LUTZ, Louisville: I nominate Dr. Lukins for a five-year term to succeed himself.

The nomination was seconded by J. Sam Brown, Ghent.

PRESIDENT MILLER: Are there other nominations?

W. B. ATKINSON, Campbellsville: I move you that the nominations close and the Secretary cast the secret ballot of the House.

The motion was seconded by James S. Lutz, Louisville, and carried unanimously, and the Secretary cast the ballot.

PRESIDENT MILLER: Dr. Lukins has been duly elected as the Councilor for the Fifth District.

Nominations are now in order for the Ninth District and the present incumbent is Proctor Sparks. May I have nominations?

S. C. SMITH, Ashland: I nominate Dr. Proctor Sparks, Ashland, to succeed himself as Councilor.

The nomination was seconded by H. V. Johnson, Georgetown and Smithfield Keffer, Grayson.

C. C. HOWARD, Glasgow: I move the nominations close and the Secretary cast the ballot.

The motion was seconded by W. B. Atkinson and unanimously carried.

PRESIDENT MILLER: The Secretary has cast the ballot and Dr. Sparks is duly elected as Councilor for the Ninth District.

The next order of business is nomination of a Councilor for the Eleventh District. The present incumbent is Dr. H. K. Buttermore, Liggett. May I have nominations?

C. B. STACY, Pineville: I nominate Dr. Buttermore to succeed himself.

The nomination was seconded by E. L. Henderson, Louisville.

ERNEST B. BRADLEY, Lexington: I move nominations close and the Secretary cast a secret ballot.

The motion was seconded by J. I. Greenwell, New Haven, and carried unanimously, and the Secretary cast the ballot.

PRESIDENT MILLER: Dr. Buttermore has been duly elected as the Eleventh District Councilor.

The next order of business is the nomination of Delegates to the American Medical Association.

C. C. HOWARD, Glasgow: Do we nominate two this time?

SECRETARY BLACKERBY: Dr. Lukins' term has expired and Dr. Atkinson was filling an unexpired term.

PRESIDENT MILLER: You are electing two.

SECRETARY BLACKERBY: One is to be elected to fill Dr. Virgil Simpson's unexpired term. That would be for one year of his unexpired term. Dr. Lukins' term expires.

S. C. SMITH, Ashland: It gives me a great deal of pleasure, to nominate one of Kentucky's distinguished men as Delegate to the American Medical Association. This man has done much for medicine in Kentucky. He is a distinguished physician and is Past President of the American College of Physicians. I wish to place in nomination Dr. Ernest Bradley of Lexington.

E. L. HENDERSON, Louisville: I want to second that nomination. Dr. Bradley is one of the best-known physicians we have in Kentucky. He is a man who always takes care of any duties that he is called upon to perform. It matters not so much whom we elect as Delegate to the Ameri-

can Medical Association so long as we elect a man who goes there and attends the meeting and really represents our organization. We have had that kind of Delegates in the past. Dr. Atkinson filled in this past meeting and he didn't miss a single meeting of the House of Delegates. Dr. Lukins has been there for the past three years and he hasn't missed a single meeting during those three years. Usually a man has to attend the meetings of the House of Delegates for several years before he really becomes useful to his state organization. He is usually there several years before he is recognized and put on committees. At this past meeting Dr. Lukins was put on one of the most important committees that we have and he performed splendid work, and I know that Dr. Bradley will do a good job. I take pleasure in presenting him.

James H. Pritchett, Louisville: For the second Delegate, I present Dr. J. B. Lukins. I take exception to what my friend Henderson said. I think it does matter whom you put up.

E. L. Henderson: I said so long as you put up a good man.

W. B. Atkinson: As you know, I filled in for Virgil Simpson, who was aptly described last night as the champion of unpopular causes. As the result of what Dr. Henderson has just said, I want to place in nomination the name of Clark Bailey, Harlan, as successor to Virgil Simpson for his unexpired term. From what Dr. Henderson has just said, we require somebody who is going to be there for a number of years. We require somebody who is brilliant, as he is, and as is the other nominee. For years and years and years all of our nominees have been from one section of the state. We should have somebody from some other section who can give some of the ideas of the more rural sections of the state. If there is one criticism of the House of Delegates of the American Medical Association it is that all of the men are beyond 65 years of age, almost all of them, except Dr. Lukins, who is 25 in his thoughts, and we need some young men up there who are not entirely satisfied with the status quo and do not object to change. Therefore, I want to place in nomination the name of Dr. Clark Bailey, and second it twice.

President Miller: Let's have it clearly understood that we are electing a Delegate to the A. M. A. for the unexpired term of Dr. Virgil Simpson, and I think it would be well to have that understood and to get that out of the way first.

E. M. Howard, Harlan: I want to ask for the floor on a point of order. Do you elect one at a time?

President Miller: I would think so.

Secretary Blackerby: Yes, because one is for one year and the other is for two years. You are nominating now for the unexpired term of Dr. Virgil Simpson.

E. M. Howard: I want to second the nomination of Dr. Clark Bailey for either one of these terms. Gentlemen, my opinion is that we have one of the most democratic organizations that can be conceived. This House of Delegates is certainly non-partisan, it is certainly broad-minded enough to be interested in the entire state. For a long time I have believed that we should have some revision in the By-Laws or regulations or Constitution of this House of Delegates so that each section of the state can be represented. If there are three Delegates to the American Medical Association one should come from east of Louisville, one should come from west of Louisville, and one should be from the metropolis of the state, which has a great population.

I know dozens of men in this room now, besides numerous other doctors of the state who could well and ably represent our Association in the House of Delegates of the American Medical Association. I can't imagine anybody who would be a better man than Dr. Bradley or Dr. J. B. Lukins. Dr. Lukins has been one of the most faithful men we have ever had in all the state. But Dr. Clark Bailey has been attending the Association meetings from the time he became a doctor. You never have a meeting of this Association that Clark Bailey is not here. You never see a meeting at which he is not a Delegate. He is trusted by his county as a Delegate and he has done a good job. He is vitally interested in the Association and in its work. He has contributed by being on the program a number of times. One year he was Orator in Medicine, and he has presented a number of good papers. If Dr. Clark Bailey is elected to represent this Association at the American Medical Association meetings he will be there, as has been said, and I think it is unnecessary to elect anybody, however competent and able, if he is not there. Dr. Clark Bailey would be there; he would represent the entire state to the best of his ability, and he has ability. I would like to urge that we recognize that part of

the state. As far as I know, we have never had a Delegate to the American Medical Association east of the City of Lexington, and certainly if there is any chance in the world to get this voted on for the two at once, I think that would be preferable, instead of one at a time.

SECRETARY BLACKERBY: One is for one year and one is for two years.

E. M. HOWARD: And those who have been nominated are for one year?

PRESIDENT MILLER: We are voting now for a successor to Dr. Virgil Simpson for his unexpired term.

SMITHFIELD KEFFER, Grayson: I want to second the nomination of Dr. Bailey. I understand he is a country doctor, and, as I said a while ago, I believe the country doctor is the salt of the earth. I know you city fellows have laboratories to help you, and all kinds of trained nurses back of you, but we have to deliver the goods. If we don't, we get a damage suit on our hands. I am for the country doctor for Vice-President or President of the United States.

E. L. HENDERSON, Louisville: I would just like to mention the fact that Dr. Howard mentioned three Delegates. Up until 1943, for the last 40 or 50 years, Kentucky has had three Delegates to the American Medical Association. At the 1943 meeting of the American Medical Association we had a redistribution of Delegates, and due to the fact that we had lost so many members and there had been so many members added from some of the larger states, we became entitled to only two Delegates.

PRESIDENT MILLER: Amongst the other qualifications for Delegate to the A. M. A. he must have been or now be a Fellow of the A. M. A. for a period of two years before he can become a Delegate. Are there other nominations?

C. C. HOWARD: I make a motion nominations close and the ballot be spread.

The motion was seconded by James S. Lutz, Louisville, and carried.

PRESIDENT MILLER: As Tellers I will appoint Drs. T. A. Frazer, B. E. Boone, Jr., and E. M. Howard. The nominees are Drs. Ernest Bradley and Clark Bailey.

PRESIDENT MILLER: We have the report on the ballot for the expired term of Dr. Simpson, Delegate to the A. M. A. Clark Bailey, 31; Dr. Bradley 27. Dr. Bailey is duly elected (Applause)

PRESIDENT MILLER: I will now entertain nominations for the two-year term. Dr. Lukins is the incumbent.

JAMES H. PRITCHETT, Louisville: I need not mention the qualifications of the man whom I want to place in nomination for the two-year term as Delegate to the A. M. A. You all know him, you all love him, and you know his accomplishments and achievements. I place in nomination the name of Dr. J. B. Lukins for a two-year term as Delegate to the American Medical Association.

The nomination was seconded by various Delegates.

W. B. ATKINSON: I move you the nominations be closed and the Secretary cast the ballot of the House.

The motion was seconded by C. C. Howard and unanimously carried, and the Secretary cast the ballot.

PRESIDENT MILLER: The secret ballot indicates that Dr. J. B. Lukins has been reelected as the Delegate to the American Medical Association. Will you stand and be recognized? (Applause)

Gentlemen, while the ballots are being counted, if it is not out of order or contrary to the rules and regulations and the Constitution and By-Laws, we might call for the report of the Resolutions Committee.

REPORT OF THE RESOLUTIONS COMMITTEE

H. G. REYNOLDS, Paducah: As Chairman of this committee I have been asked to present these resolutions:

WHEREAS, The National Selective Service System has declined to authorize the deferment of pre-medical students, and any others not subject to the draft, not enrolled in medical schools prior to July 1, 1944, and

WHEREAS, Such failure to provide the necessary quota of male medical students for future graduation constitutes a threat to an adequate supply of physicians for civilian medical services in the post-war era, and

WHEREAS, It is recognized that the only apparent way to meet this serious situation is through the passage of an Amendment by Congress to the Selective Service Act requiring the Selective Service Director to provide for the deferment of a quota of 6,000 medical and pre-medical students annually, and

WHEREAS, Such an Amendment, known as H. R. 5128, has been introduced by Representative Miller of Missouri,

NOW THEREFORE BE IT RESOLVED, by the House of Delegates of the Kentucky State Medical Association that the passage of H. R. 5128 is of the utmost importance for the security of medical education in this country and for the safeguarding of medical care, and

BE IT FURTHER RESOLVED, that the members of this Association be urged to communicate immediately with their respective Senators and Representatives, calling on them to vote for and lend every effort to secure passage of the Miller Bill, H. R. 5128, and that the Secretary see that each Senator and Representative has a copy of this resolution at once.

E. L. HENDERSON, Louisville: I move its adoption.

The motion was seconded by Ernest B. Bradley, Lexington.

J. B. LUKINS, Louisville: Isn't that practically the same resolution as passed at the A.M.A.?

E. B. BRADLEY: I was on that committee, and I read the report to the House of Delegates the first day. If the Selective Service Act goes into effect as it is now we will not have any medical students. There are no pre-medical students now. We are asking the deferment of 6,000 pre-medical and medical students, so that in four years from now we will have some more doctors coming on; otherwise they will all be in the Army.

PRESIDENT MILLER: It would seem to me that the Bill also should provide for men who are already in the armed services and who have already qualified by completing their pre-medical work. Some of those men are really entitled to some consideration and if there were some provision in the Bill whereby they could be discharged from the armed forces, men who are thoroughly qualified to enter medical school immediately, I think it would make this Bill eminently fair.

C. C. HOWARD, Glasgow: I want to second that, or add that thought to this resolution.

SMITHFIELD KEFFER, Grayson: Why discharge them from the armed forces? Let them remain in the armed forces but continue their medical services.

PRESIDENT MILLER: You know what the Army has done with men already in medical school. They have curtailed the program and a number of those men are no longer provided for; they are not providing for the tuition of a number of them.

L. S. HALL, Campbellsville: I would like to mention an item that was in the A.M.A. Journal last month on this subject. Some of the eastern schools wrote to the head of the Selective Service and suggested that men who had been in the armed services and had served two years and who had enough pre-medical work so they could finish their pre-medical training within one nine-month school term, be allowed to do so; and another item was that the men who were interested in studying medicine be discharged for the purpose of going to medical school.

W. B. ATKINSON: Maybe I can do a little clarification on this point. As I understand, this resolution is petitioning the congress to pass that Bill. That is the whole purpose of the resolution. They are asking for 6,000 pre-medical students per year who will be deferred. Now you have three things. You have got your Congress, you have got Selective Service, and you have got the War Department. Anyone who is serving in the armed forces now is entirely out from under Selective Service. Any Act of Congress is 100 per cent binding on Selective Service, and at the present time anyone who is in medical school is now exempt from induction into the armed forces. It is the pre-medical students who are not deferred after July 1st of this year.

One of the reasons that General Hershey, who is the Director of Selective Service, has not deferred pre-medical students is that the deferring of men is at the local board level. If you want 6,000 from the whole country, you can take one-fiftieth for Kentucky, which is just about right, which would give Kentucky 130, or something like that. That would mean that 130 would be eligible for deferment from Kentucky. Now, there are 165 local boards. How are you going to say this local board can have a man and this one can have a man, but this one over here cannot have a man? In order to keep out discrimination, the Selective Service regulations have not covered it at all; they have either cut off all of them or left them all in as of July 1, 1944. Because of the administrative problems involved, Selective Service has not promulgated resolutions on it. Anything that you want done must be done by Congress.

The same thing occurred in relation to farmers. Selective Service knew that we were taking too many farmers, because men in industry were deferred and farmers were not deferred. A law was passed by Congress deferring farmers, and Selective Service was able to take care of it. So please do not blame General Hershey for this. It is up to Congress if you want a quota. General Hershey has no authority under the Selective Service Law to set up quotas. In fact, the Selective Service Law, as passed by Congress, says that there shall be no discrimination on account of race, creed, or occupation. He

cannot do it without an act of Congress, so you are exactly right in petitioning Congress and not Selective Service.

PRESIDENT MILLER: You have heard the resolution. What is your pleasure in regard to it? Its adoption has been moved.

The question was called for and the motion to adopt the resolution was carried.

PRESIDENT MILLER: Dr. Reynolds, will you continue with your report?

H. G. REYNOLDS, Paducah:

WHEREAS, The programs of the Kentucky State Medical Association for 1943 and 1944 have been most instructive and valuable as postgraduate courses for the rank and file of the profession, and

WHEREAS, The success of these programs is wholly due to the splendid cooperation of the American Medical Association, the American College of Surgeons, the American College of Physicians, through the National Wartime Graduate Meetings Committee and the Regional Committee of the Wartime Graduate Medical Meetings and the essayists of national reputation whom they have furnished,

THEREFORE BE IT RESOLVED, That the House of Delegates, being duly assembled in this 94th Annual Meeting, go on record as expressing our appreciation to these national associations for their wartime contribution to our Association, and the representatives of the Armed Forces in attendance, and

BE IT FURTHER RESOLVED, That this resolution be spread upon the minutes of this Association, and in further testimony of our appreciation, that a copy of this resolution be forwarded to the respective associations having participated in these programs.

J. SAM BROWN, Ghent: I move the adoption of the resolution.

The motion was regularly seconded and carried.

H. G. REYNOLDS, Paducah: We have had three deaths of former officers of the Association, V. A. Stilley, C. W. Shaw and Virgil E. Simpson.

RESOLUTION ON THE DEATH OF DR. V. A. STILLEY

In the death of Dr. V. A. Stilley, Kentucky medicine has lost a man who was outstanding in many respects. His patients, his friends and particularly the doctors of Kentucky held him in high esteem, and all who came in contact with him learned to love him.

He was prominent in the affairs of medical health for a number of years. One of his outstanding accomplishments in his latter life was the building up of the McCracken County Health Department. His one other fond hope was to have the Federal Government donate to the state the cottages and other buildings at the site of the Kentucky Dam to be used for a Tuberculosis Sanitarium for Southwestern Kentucky.

Dr. Stilley was honored by being elevated to the presidency of the Kentucky State Medical Association. His rather sudden death came as a shock to his many friends.

Our loss is great and we, his friends, mourn his passing.

RESOLUTION ON THE DEATH OF DR. C. W. SHAW

The Kentucky State Medical Association notes with sorrow the death of one of its beloved members, Dr. C. W. Shaw, of Alexandria. His death occurred September 11, 1944. He filled out the unexpired term of Dr. M. A. Stein, Councilor of the Eighth District in 1926, and served as Councilor until 1936. He was very active in this office visiting his county societies every year and keeping in constant touch with its members.

Therefore, Be It Resolved, that the House of Delegates, being duly assembled, go on record as expressing its appreciation for the valued services of a former Councilor of this Association.

RESOLUTION ON THE DEATH OF V. E. SIMPSON

The Kentucky State Medical Association notes with great sorrow the death of Dr. Virgil Earl Simpson, which occurred in Louisville on May 3, 1944.

For some 40 years a member of this Association, at the time of his death and for many years before he was its Delegate to the American Medical Association.

His brilliant mind, his tireless energy, his consuming interest in scientific medicine, had gained for him a position in the forefront of his chosen field, that of internal medicine.

As a teacher of medicine, he was forceful and impressive and a full generation of physicians, thousands in number, widely scattered, owe their sound training in large measure to him.

Great as his interest was in clinical medicine and in its teaching, his greatest passion perhaps was for organized medicine. To this his incisive mind, his unflagging industry and his consuming interest were given without stint. His services not only to his own county so-

ciety but to many in this and other states, his lucid reports to this House of the proceedings of the House of Delegates of the American Medical Association, his work on the Committee on Revision at the last two Pharmacopoeial Conventions, are but examples of his outstanding contribution to the profession's welfare.

This House of Delegates orders that this expression of the esteem in which it held Dr. Simpson and of its gratitude to him be recorded in its minutes and that a copy be sent to his widow.

SMITHFIELD KEFFER, Grayson: I move the resolution be adopted.

The motion was regularly seconded and carried.

PRESIDENT MILLER: Gentlemen, the next order of business is nominations for Orator in Surgery.

JAMES S. LUTZ, Louisville: I wish to nominate Dr. R. T. Hudson, of Louisville.

The nomination was seconded by Dr. E. R. Gernert, Louisville.

PRESIDENT MILLER: Are there any other nominations?

W. B. ATKINSON, Campbellsville: I move that the nominations be closed and the Secretary cast the ballot of the House.

The motion was seconded and carried and the Secretary cast the ballot.

PRESIDENT MILLER: Dr. R. T. Hudson has been elected as Orator in Surgery.

The next order of business is election of Orator in Medicine.

J. H. BLACKBURN, Bowling Green: I would place in nomination for Orator in Medicine a man who I know from personal experience is serving some 30,000 people, he being the one doctor in his county who is on his feet, the other two being practically retired. He is a man who has done effective, good work in our part of the state for the last few years. He is a graduate of Vanderbilt University, and he is a man who, I feel, will honor the position of Orator in Medicine. I place in nomination the name of D. G. Miller, Jr., Morgantown.

J. B. LUKINS, Louisville: I want to second the nomination of Dr. Miller. I think it is a good step for us to take. He is an up and coming young practitioner. He is a bright man, he is a young doctor, and he is trying to do scientific, modern medicine in a country town. I think he ought to be encouraged. He will make a worthy representative of this organization as our Orator in Medicine.

C. C. HOWARD, Glasgow: I move the nominations be closed and the Secretary cast the ballot of the House.

The motion was seconded and carried unanimously and the Secretary cast the ballot.

PRESIDENT MILLER: Dr. D. G. Miller, Jr., Morgantown, is elected as Orator in Medicine for next year.

The next order of business is the selection of the place of meeting. May we have nominations?

J. H. BLACKBURN, Bowling Green: I don't know what the status of this Association is regarding its meeting place. The Association goes on record as favoring Louisville and we meet there a time or two and then we are informed by Louisville that they don't want us. Now if the same conditions exist next year, I will say that Bowling Green wants you, we would be glad to have you, and as one of our men here phrased it, I think we can vouch for a place in which to hold our meetings. Bowling Green will be glad to have you next year if you see fit to come.

E. L. HENDERSON, Louisville: I want to correct Dr. Blackburn. Not once has Louisville said, "We don't want you." The meeting would have been held in Louisville this time, but the hotels couldn't give us accommodations. Louisville always want you and you are always welcome. We are always glad to have you and we will do the best we can for you, but this time we couldn't get hotel accommodations. We have got to meet somewhere where the doctors can get if this war continues, and I would like to make a motion that this question be referred to the Council and that it be left to them to decide where and when we have our next Annual Meeting.

PRESIDENT MILLER: I think Dr. Blackburn understood that and he just said that facetiously.

Are there any other nominations or any other motions? If not, we will vote on the substitute motion first, which was that we defer the matter of meeting place and leave that to the Council.

The question was called for and the motion was carried.

SECRETARY BLACKERBY: The Council has approved the following accounts:

1944			
Sept. 15—Voucher Check No. 1			$ 90.22
T. Atchison Frazer, Marion			
To expense as Councilor of 1st District		$ 90.22	
Sept. 15—Voucher Check No. 2			22.00
E. L. Gates, Greenville			
To expense as Councilor of 2nd District		22.00	

Sept. 15—Voucher Check No. 3			62.58
Charles A. Vance, Lexington			
To expense as Councilor of 10th District		62.58	
Sept. 15—Voucher Check No. 4			5.00
J. R. Popplewell			
To return of dues paid in duplicate for J. B. Tartar, Russell Springs		5.00	
Sept. 15—Voucher Check No. 5			59.99
Louisville Postmaster,			
To July postage		24.59	
To August postage		35.40	
		59.99	
Sept. 15—Voucher Check No. 6			92.82
Courier-Journal Job Printing			
To 5,500 inserts (2,775 Dr. McCormack 2,775 Dr. Miller)		81.44	
To 759 print A. T. McCormack printed		11.38	
		92.82	
Sept. 15—Voucher Check No. 7			70.34
Bush-Krebs Co., Louisville			
To 1 halftone of McCormack home		5.69	
To 20 zinc halftone portraits of men		68.65	
		74.34	
Less credit		4.00	
		70.34	
Sept. 15—Voucher Check No. 8			130.38
F. & V. Manufacturing Co., East Providence, R. I.			
To 324 bangles		130.38	
Sept. 15—Voucher Check No. 9			39.90
The Pendennis Club			
To 19 dinners for Program Committee and Councilors		39.90	
Sept. 15—Voucher Check No. 10			7.50
Standard Typewriter & Supply Co.			
To overhauling Corona		7.50	
Sept. 15—Voucher Check No. 11			12.63
State Department of Health			
To reimbursement for long distance calls		12.63	
Sept. 15—Voucher Check No. 12			2.90
The Stewart Dry Goods Co.			
To 1 bolt of ribbon		2.90	
Sept. 15—Voucher Check No. 13			10.89
W. K. Stewart Company			
To 4 reams Manilla paper		10.89	
Sept. 15—Voucher Check No. 14			171.50
The Times Journal Publishing Company			
To 2,300 September Issue, 15 1-2 pages 6 pt. tabular work		740.00	
To 3 ads in red		25.50	
To inserts		6.00	
		771.50	
Less credit by check No. 214		600.00	
		171.50	
Sept. 30—Voucher Check No. 15			106.65
P. E. Blackerby			
To September salary, Secretary		135.00	
Less Social Security tax for September	1.35		
Less Withholding tax for Septemher	27.00	28.35	
		106.65	
Sept. 30—Voucher Check No. 16			34.65
Elizabeth Lamhert			
To September salary	35.00		
Less Social Security Tax for Sept.	.35	34.65	
Sept. 30—Voucher Check No. 17			185.00
State Department of Health			
To services rendered		185.00	
Sept. 30—Voucher Check No. 18			16.44
E. H. Roederer, Louisville			
To lettering 137 ribbons		16.44	
Sept. 30—Voucher Check No. 19			10.20
Collector of Internal Revenue			
To Social Security taxes from July through September 30, 1944—1 pct. of pay roll paid as follows:			
P. E. Blackerby	4.05		
Elizabeth Lambert	1.05	5.10	
To employees' share due from July 1 through September 30, 1944—1 pct. of pay roll paid, as follows:			
P. E. Blackerby	4.05		
Elizabeth Lambert	1.05	5.10	
		10.20	

Sept. 30—Voucher Check No. 20		81.00
Collector of Internal Revenue		
To Withholding Tax from July 1 through September 30, 1944 deducted from salary P. E. Blackerby	81.00	
Sept. 30—Voucher Check No. 21		17.03
L. H. South		
To expense of trip to Bowling Green	10.23	
To expense of trip to Lexington	6.80	
	17.03	
Sept. 30—Voucher Check No. 22		28.70
Mayme Sullivan		
To State Meeting Expense for self and 2 assistants	28.70	
Sept. 30—Voucher Check No. 23		21.10
Elva Grant		
To State Meeting expense	21.10	
Sept. 30—Voucher Check No. 24		7.30
Margaret Hook		
To State Meeting expense	7.30	
Sept. 30—Voucher Check No. 25		9.94
Agnes Blair		
To State Meeting expense	9.94	
Sept. 30—Voucher Check No. 26		3.65
Emily Stoecker		
To State Meeting expense	3.65	
Sept. 30—Voucher Check No. 28		25.00
Otho Haskins		
To Honorarium	25.00	
Sept. 30—Voucher Check No. 29		1.90
State Department of Health		
To reimbursement for long distance calls	21.90	
Sept. 30—Voucher Check No. 30		9.25
Art Embroidery Company, Louisville		
To 37 stars on Service Flag	9.25	
Sept. 30—Voucher Check No. 31		28.19
Dush-Krebs Co., Louisville		
To 7 halftones	28.19	
Sept. 30—Voucher Check No. 32		2.15
Electric Blue Print & Supply Co., Louisville	2.15	
Sept. 30—Voucher Check No. 33		5.00
Shrader Bros., Louisville		
To Cleaning Service Flag	5.00	
Sept. 30—Voucher Check No. 34		103.00
The Standard Printing Co., Louisville		
To 1,200 copies program for State Meeting	95.00	
To 500 printed envelopes for State Meeting programs	8.00	
	103.00	
Sept. 30—Voucher Check No. 35		1.30
Union Transfer & Storage Company		
To hauling 1 trunk State Meeting	1.30	
Sept. 30—Voucher Check No. 36		398.08
Jos. T. Griffin Co.,		
To erecting scientific exhibits for State Meeting	383.08	
To 10 Signs	15.00	
	398.08	
Sept. 30—Voucher Check No. 37		488.50
The Times Journal Publishing Co., Bowling Green		
To 2,000 October Issue—59 pages	443.50	
To 3 ads in red	25.50	
To 1 ad in yellow	10.00	
To extra postage	2.00	
To printing and inserting supplements in September Journal	7.50	
	488.50	

J. A. ORR, Paris: I move the accounts be approved and paid.

T. A. FRAZER, Marion: I second the motion.

PRESIDENT MILLER: The motion is made and seconded that we approve the accounts for payment. The motion carried.

A motion to adjourn was regularly made, seconded and carried, and the House of Delegates adjourned sine die at 9:30 A. M.

P. E. Blackerby, Secretary

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COUNTY SOCIETY REPORTS

Campbell-Kenton: The regular monthly meeting of the Campbell-Kenton County Medical Society was held at the Campbell County Health Center on Thursday, November 5, 1944 with twelve members present. In the absence of the president and vice president, the meeting was called to order by the secretary, Dr. R. L. Biltz at 10 P. M.

The minutes of the previous meeting were read and approved.

The following bills were ordered paid:

Salary for secretary	$75.00
Stamps and Stationery	21.85
Light Bulb (Projector)	2.44
	$99.29

An invitation from the Academy of Medicine of Cincinnati inviting the members to hear Doctor Herbert C. Maier on November 7 was read.

A motion was made by Doctor C. N. Heisel and seconded by Dr. J. G. VanDermark that a letter be written to the Southern Medical Society inviting them to return to Cincinnati in the near future as guest of the Campbell-Kenton Medical Society.

There was a general discussion on the Cancer Clinic.

The program of the evening consisted of slides shown through the courtesy of the Lederle Laboratories.

There being no further business the meeting adjourned.

Robert L. Biltz, Secretary

Scott: The regular monthly meeting of the Scott County Medical Society was called to order by the President, L. F. Heath, at the John Graves Ford Memorial Hospital in Georgetown, October 5, 1944.

Members present were Drs. Heath, Smith, Barlow, Allphin, Roberts, Don Thurber and Johnson.

After a delightful noon day dinner, minutes of previous meeting were read and approved.

D. B. Thurber reported a second case of Polio had developed in Scott County and sent to Louisville for treatment.

A letter from Major Fred Wilt was read describing his work in the Army Hospital in Florida

W. S. Allphin, the Delegate to the State Medical Association Meeting, gave a report on the activities of the House of Delegates.

Moved and seconded that the Secretary be instructed to write a letter of thanks and appreciation to Mrs. Marie Adams, who is finishing up her 24th year as Visiting Nurse for the Scott County Health Department, carried.

There being no further business the meeting adjourned to meet the first Thursday in November.

H. V. Johnson, Secretary.

Scott: The regular meeting of the Scott County Medical Society was called to order November 2, 1944 at the John Graves Ford Memorial Hospital by the President, Dr. L. F. Heath, with the following members present: Drs. L. F. Heath, P. H. Crutchfield, S. S. Ammerson, A. F. Smith, M. D. Sanford, W. S. Allphin, E. C. Barlow, D. B. Thurber, Mrs. Marie Adams and H. V. Johnson.

Mrs. Marie Adams, visiting nurse for the Scott County Health Department who has just finished up her 24th year of service for the people of Scott County, was our guest.

Minutes of the previous meeting were read and approved. After a delicious dinner served by the Hospital Management, Dr. Don B. Thurber, Health Offfficer for Scott County gave a report on the Polio situation and said that up to date we have had 6 cases in the county. He also reported that the State Board of Health was willing to send their portable X-ray outfit to make a chest examination on the school children of the county provided it met with the approval of the Medical profession.

It was moved and seconded that we invite the State Board of Health to send the X-ray outfit to Scott County for examination of our school children. Carried.

Mrs. Marshall, the Superintendent of the hospital then made a report on the conditions at the hospital and asked if any one had any constructive criticism to make. She said that things seemed to be moving along very nicely at the hospital so far as she knew.

L. F. Heath, our President, announced that he would be host at the next meeting of the society.

There being no further business the meeting adjourned to meet the first Thursday in December.

H. V. Johnson. Secretary.

Union Medico-Dental: The Union Medico-Dental Society met at 8:00 P. M. October 3, 1944 at the Union County Health Department. Motion pictures were shown on the repair of the Perineum following complete laceration and the repair of cystocoele and rectocele.

Those present were: J. W. Conway, C. B. Graves, H. B. Stewart, and Bruce Underwood.

There being no further business the meeting adjourned.

Bruce Underwood, Secretary.

NEWS ITEMS

With 16,133 cases reported up to October 14 by the United States Public Health Service, the 1944 epidemic of infantile paralysis has officially become the second worst in the recorded history of the disease in this country, the National Foundation for Infantile Paralysis has recently announced. The total for the first forty-one weeks of the year was 353 cases more than were reported for 1931, previously the second worst year for the disease. The 1916 epidemic set the record with 27,621 cases.

Although the peak of the outbreak was passed in September, 710 new cases have been reported for the week of October 7-14, nearly half the record weekly total of 1,683 reached in the seven days ending September 2, according to the foundation.

Dr. James W. Craddock, 65, Louisville, a physician here for twenty years, died Tuesday, October 31st at Kentucky Baptist Hospital. He was a native of Priceville and practiced medicine at Bonnieville and Munfordville for twenty years before moving to Louisville. He was graduated from the Kentucky Academy of Medicine in 1904.

Dr. B. F. Woolery, aged 64, Louisville, a general practitioner here for thirty years, died suddenly of heart disease while delivering a patient. He was a native of Bedford, Indiana, and was graduated from the University of Louisville School of Medicine, and worked as medical examiner at the Goodyear Engineering Corporation, Charlestown, Indiana.

Dr. Harry C. Woodward, Louisville, 68, a physician for forty years, died after an illness of twelve years. He was a native of Eminence and was graduated from the Louisville Medical College in 1902. He served as Captain in the Medical Corps World War No. I. Since 1934 he has been preventive clinic physician of the Louisville City-County Health Department.

The American Urological Association offers an annual award not to exceed $500 for an essay (or essays) on the result of some specific clinical or laboratory research in Urology. The amount of the prize is based on the merits of the work presented. Competitors shall be limited to residents in urology in recognized hospitals and to urologists who have been in such specific practice for not more than five years. All interested should write the Secretary, Dr. Thomas D. Moore, 899 Madison Ave., Memphis 3, Tennessee for full particulars.

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VOLUME XLII

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LOUISVILLE, KENTUCKY
1944

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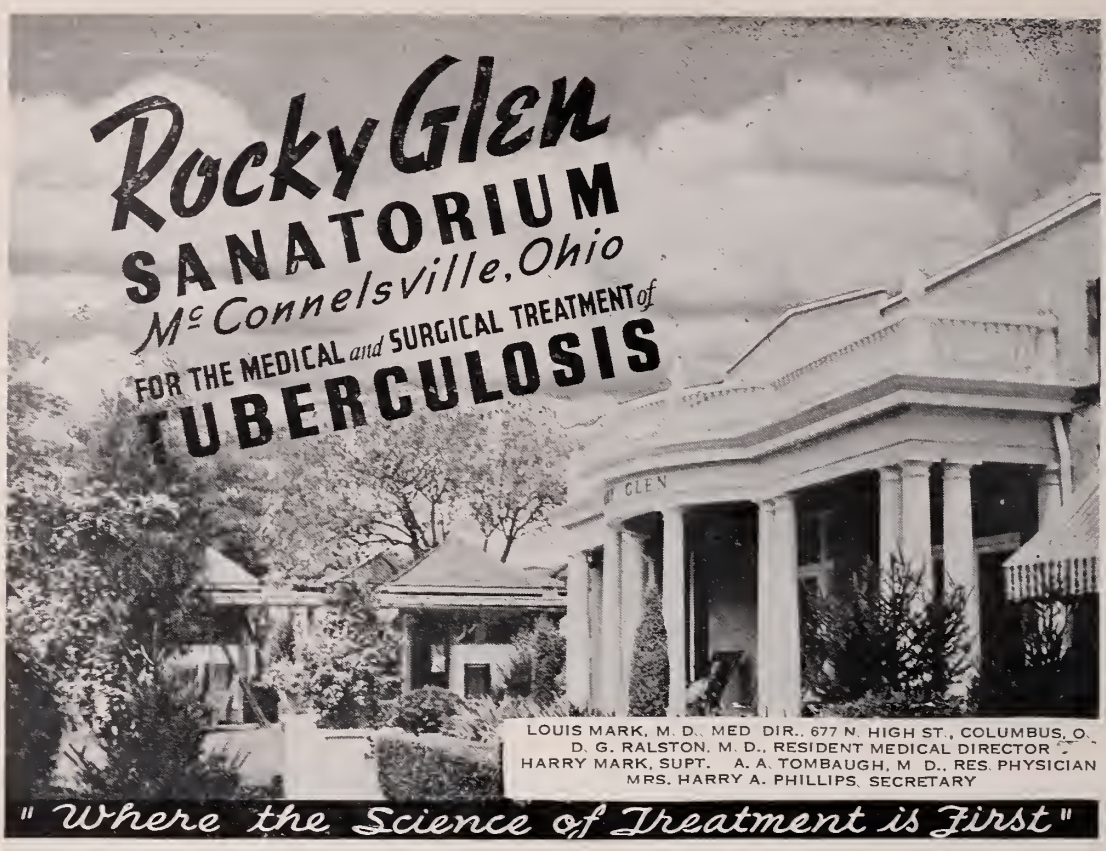
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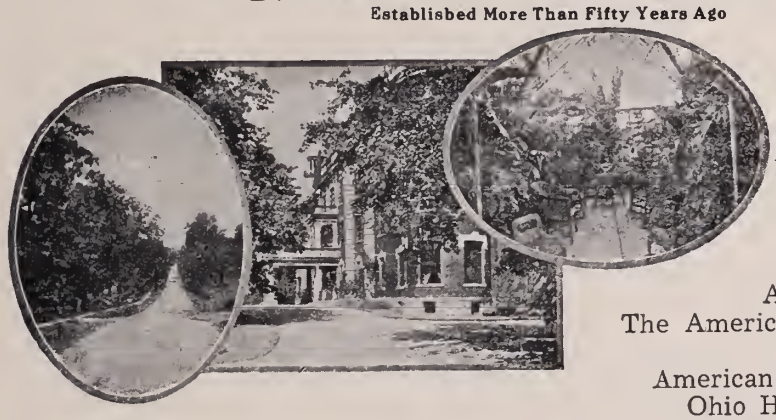
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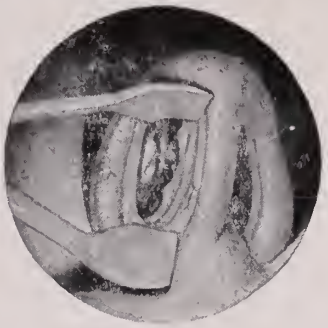


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